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ESTABLISHED IN 1872

PAPER TRADE JOURNAL

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY

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FIFTY-SECOND YEAR

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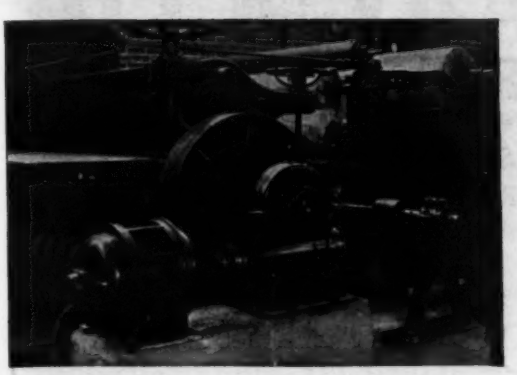

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PAPER TRADE JOURNAL

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FIFTY-SECOND YEAR

Published Every Thursday by the

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LESLIE R PALMER, PRESIDENT — GEO. S. MACDONALD, VICE-PRESIDENT & TREAS. — F. K. HOPPIE, SECRETARY

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TABLE OF CONTENTS

	PAGE
Power Show	27
National Container Men Plan Busy Year	30
Charles G. Palmer With Hanchett Co.	30
Philadelphia Trade Disappointed	32
Federal Reserve Report	32
Paper Men and Typothetæ to Dine	32
Beck Co. Adds Sulphite Bonds	32
Stock Collections Extended	32
Spirit of Caution Controls Chicago Market	36
Moser Cashes on Delivery Vehicles	36
Visit New Bradner-Smith Building	36
Wrapping Paper Men Meet	36
Two Meetings in Pittsburgh	36
Lenox Paper Box Company Incorporates	36
Succeeded by Boxboard Association	36
Montreal Stock Exchange Sees Paper Boom	38
Price Bros. May Buy Saguenay	38
New Wharves for Spanish River	38
Union Bag Loses On Appeal	38
Move Against Lumber Export	38
Trade Marks Department	40
English Interests Buy Timber Limits	40
Visit American Company's Plant	40
Open Large Warehouse	40
Canadians Own 70 Per Cent of Pulp Securities	40
Recent Incorporations	42
Paper and Pulp Production for September	44
Urges Tariff for Canada Paper Man	46
Smith Visits Secretary Baker	46
EDITORIAL	50
New York Trade Jottings	51
Norway Lockout Averted	51
TECNICAL SECTION	53
Make Borings for Paper Plant	60
Sutherland Company to Erect Addition	60
COST SECTION	61
Eddy Corporation's Annual	64
Imports and Exports of Paper and Paper Stock	66
Government Bids and Awards	68
MARKET REVIEW:	
New York Market Review	68
Market Quotations	69
Miscellaneous Markets	72

Want and For Sale Advertisements, Pages 76, 77, 78, 79

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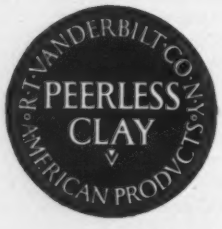

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ESTABLISHED IN 1872

PAPER TRADE JOURNAL

Vol. LXXVII. No. 23 NEW YORK AND CHICAGO Thursday, December 6, 1923

POWER AND MECHANICAL ENGINEERING SHOW

Exposition Which Opened at Grand Central Palace on Monday Boasts Unusual Variety of Exhibits—Instructive Manner in Which Exhibits Have Been Arranged Arouses Comment—Apparatus Shown Which Aims at Various Economies in Labor—Many Devices for Measuring the Flow of Fluids and Gases Displayed—Two Societies Holding Technical Meetings During Week.

In general interest and in number and variety of exhibits the second national exposition of Power and Mechanical Engineering now in progress at the Grand Central Palace gave early promise of greater success even than that scored by the first exposition.

The exposition opened at 2 o'clock Monday afternoon and will continue for the remainder of the week, opening at noon daily and closing at 10 p. m.

The exposition has for its purpose the bringing together of exhibits of manufacturers of power and mechanical equipment so that engineers and executives may have an opportunity for studying the latest devices. The fact has been kept clearly in mind, however, that there is great need for more general understanding of the importance of power to modern civilization and of the need for conservation of the resources used in power development.

For that reason a series of educational exhibits are included. These are devoted to the subjects of fuels, modern high pressure boilers and modern locomotives.

Shown in Instructive Form

Speaking of the exhibits as a whole, it may be said, that the exhibitors have presented their apparatus in as instructive a manner as possible and certificates of merit are to be given for exhibitions of excellence. An educational program of motion pictures is also a feature of the show.

The exposition is notable for the large number of exhibits of boilers and other steam generating units. Several boiler manufacturers are showing models of their equipment and one is in operation which shows the circulation of the water within the boiler. Numerous drawings and photographs amplify many of the exhibits, showing modern boiler installation.

Radiant heat superheaters are a comparatively recent development and are of considerable interest. Models of these are shown as are the various types of superheaters, economizers, etc.

Devices to increase the effectiveness and economy of combustion are numerous and make up an exceedingly interesting part of the display. Two types of preheaters are shown. This device utilizes the heat of the stack gases to raise the temperature of the air which is used for combustion chamber, thereby increasing the efficiency of the furnace. Many stoker models are in evidence and there are several exhibits of burners used for pulverized fuel, all of recent design.

The operators of small plants have an opportunity to study exhibits of shaking dumping grates. Refractories are represented in several exhibits. High temperature insulation in brick block, powdered and cement form, and air-cooled blocks, clinker proof blocks and other forms designed to reduce furnace maintenance, increase furnace efficiency, and reduce labor cost are displayed.

Soot blowers for stationary and marine boilers are on exhibit with charts showing performance and economies that may be obtained therefrom.

Condensers and Cooling Towers

Users of condensers and cooling towers have the chance to study the various types of condenser apparatus as used in power plant. Steam jet pumps, hot well pumps, vacuum pumps, and several kinds of condenser tubes are shown. Two exhibitors of cooling towers show models in actual operation.

Numerous exhibits force home the importance of clean air in the turbine room and these will especially interest those who have suffered generator burnouts due to dust settling in the windings of machines. There are exhibits of devices for eliminating dust and bacteria from air used in power plants or for industrial purposes.

There are many devices and materials not needed in all power plants but of great value in a large number. Among these are apparatus for reducing scale and corrosion in water in steam generating units, and protective coatings for metal surfaces exposed to the temperature. These latter are of value in boiler stacks, flues, pipes, flumes and equipment for contractors.

The show also has a large section devoted to devices for measuring the flow of fluids and gases and for measuring and regulating temperatures. These devices have all been developed by demand for increased economies in power plant operation and without them increased economy would have been impossible.

Several excellent exhibits feature apparatus for transmission of power. Ball and roller bearings for all types of service, self-oiling bearings, accurately cut gears, clutches of all kinds, right-angle transmission and leather and steel transmission belting, are displayed in considerable variety.

Devices for grease lubrication under high pressure are an interesting part of this series of exhibits.

Economics in Labor

Labor scarcity has emphasized the importance of seeking out possible economies by the use of material handling equipment. The addition of such equipment to the show is, therefore, a timely move as it affords a real opportunity for engineers to study the latest development in this art. The equipment shown includes conveyors of all kinds, fireless steam locomotives, industrial trucks, elevators and hoists. One exhibitor shows an overhead crane telescopic hoist in operation. This device is developed especially for use in raising ashes from underground boiler rooms to a level where they can be dumped directly into ash carts.

Self-contained refrigerating plants are featured by one exhibitor who shows a model in operation. This type of apparatus, which uses ammonia, is designed for installation in restaurants, residences, laboratories, etc.

Preparation of coal involves an interesting problem in the design of crushers and breakers and one single-roll coal crusher is shown at the show. This is made of massive steel castings with heavy fabricated steel sections on the end. The roll segments and breaker plates are cast from high-grade charcoal iron deeply chilled.

Power plant operation requires a great deal of miscellaneous equipment some of which is represented. Hack saws, grinding machines, drilling machines, lavatory equipment, etc., make up part of this exhibit.

Last year 48,000 engineers, executives, power plant operators and students attended the Exposition and the attendance at the opening days this year indicate that that number will be exceeded at this show.

Mechanical Meetings Held

During the week technical meetings will be held by the American Society of Mechanical Engineers and the American Society of Refrigerating Engineers.

The former at their initial meeting Monday afternoon unanimously indorsed Secretary Mellon's tax reduction plan. The resolution on that subject was offered by W. S. Finlay, Jr., of New York City, vice-president of the American Water Works and Electric Company.

Tuesday the two societies held a joint session with W. S. Shipley presiding.

Following are some of the interesting exhibits to be found at the show:

C. J. Tagliabue Mfg. Co.

The exhibit of C. J. Tagliabue Manufacturing Company of 18-88 Thirty-third street, Brooklyn, occupied space 59. The company was represented by the following: L. C. Irwin, vice-president; H. D. Cooke, general sales manager; V. Wichum, department manager; R. M. Wilhelm, department manager; F. D. Harger, Mono department manager; B. O. Pallin, department manager; A. F. Rucks, sales engineer.

The following representative products of the company's manufacture were shown:

Tag Automatic Controllers for temperature and pressure.

Tag recording thermometers and recording pressure gages with improved and rugged construction, noted for their evenly graduated chart for all ranges, the pen adjustment both for position and pen pressure, the non corrodible-inverted pen-arm, the clock starter and improved chart holder.

Tag dial indicating thermometer duplicating the improved construction and reliable operating principles of the recorder, duplicating its sensitiveness, accuracy and durability.

Tag Mono duplex recorder for flue gas analysis which gives simultaneously on one and the same chart a continuous record of both CO2 and combustible gases. This is of primary importance in boiler room economy since CO2 records alone are misleading.

Tag automatic fuel oil shut-off valve—A safety device for oil burners using either steam or air for atomizing. When the air or steam fails the Tag shuts off the oil and keeps it shut off until the trip mechanism is manually reset. Until this is done no oil can pass the burners.

Tag industrial thermometers featuring in the mercury type the Tag-Hespe red reading column, a broad red line from the top of the tube to the top of the mercury column. When the mercury rises it covers more of this red line, when the mercury falls a correspondingly greater length of red line is exposed. The red line attracts the eye at first glance and is easy to follow down to its bottom which is, of course, the top of the mercury, where the temperature is read. An exclusive Tag feature bringing to the accurate mercury thermometer the easy reading qualities of the spirit thermometer. In connection with these thermometers particular attention is called to the exhibit of Tag-Hespe Glass.

Tag oil testing instruments—Many of these have been adopted as standard by the A. S. T. M., the United States Government, American Petroleum Institute, etc.

Tag hydrometers, chemical thermometers, vacuum absolute pressure gages are also included in the exhibit.

Foxboro Co., Inc.

Space 69 occupied by the Foxboro Company, Inc., drew its share of visitors. This company exhibited a complete line of single, double and triple pointer draught gages of both recording and indicating types in operation with movements exposed to view showing the various workings and also a combined instrument which both records and indicates draught.

Also shown in operation is a CO2 recorder in which no glass or rubber is used which has combined in it draught recording facilities.

Here was also shown a complete line of valve type thermometers used in the measuring of any temperature from minus 60 to plus 1,200 degrees up to a distance of 500 feet as well as a special type for turbine temperature. The latter has as a feature the absorption of vibration. These instruments are also used on indicating gages.

The company for the first time showed a panel with indicators with the new style pointers and figures. These are very plain and makes accuracy in reading an easy matter.

Another novel feature of the exhibit was the automatic temperature control of the Unrecording Type set on a graduated scale.

Republic Flow Meters Co.

The main feature of the exhibit of the Republic Flow Meters Company, located at Space 6, was a twelve meter battery and panel with orifice connections for changing the various rates of flow. This is connected with a plug switchboard which controls any meter by the simple operation of putting a plug in a hole of the Load Indicator.

The Republic's display includes a large picture of a boiler front with boiler and draught indicators.

CO2 records are shown alone. A meter cut in half shows the detail of operation. Several representatives of the company are on hand to demonstrate all the devices shown.

Norma Co. of America

Featured in the exhibit of the Norma Company of America is the Norma Minimeter, an instrument which measures precisely to the one twenty-thousandth of an inch. This is a true precision measuring instrument. After once being set to a standard it combines exactness with commercial adaptability, eliminating the personal error and permitting measurements to be made with great rapidity. A single lever carrying a pointer and with two unequal arms, rests upon two knife edges. The arc described by the end of the pointer in its movement, is determined by the distance between the two knife edges. A spring holds the lever on its bearings and also brings the pointer back to the lowest extremity of the scale after each reading. The mechanism is enclosed in a dust tight tube, with a readable scale at the end protected by glass. All working parts are of the best material.

The exhibit also included all types of roller bearings including sulphur lining types.

Keystone Lubricating Co.

The Keystone Lubricating Company showed the Keystone manifold safety lubricants with the high pressure system of lubricating a group of boilers from one central point.

The company first showed this innovation at the last paper show and in the short space of time since then it has been adopted and utilized by thirty different classes of machinery including paper, steel, rubber, woodworking, mining and cement.

Interest was drawn to this exhibit by many who desired to try their hand in the strong-man contest. This contest consisted of turning a wheel and registering pressure, the man registering the highest pressure each day being awarded a box of cigars. Among the visitors who registered a high mark during the opening days of the show were F. B. Lythgoe of the King Refrigerator Company, Mr. Jones of the Homestead Valve Company and D. C. Knowles of the Tennessee Furniture Corporation.

Among the Keystone representatives who helped entertain visitors at the exhibit are Chief Engineer C. O. Norstrum, Arthur T. Lowry, Messrs. Street, Bitler, Muir and Hollans.

The Bristol Company

The Bristol Company showed a large variety of thermometers with a fine type of moisture-proof case which the company boasts can be put into a tank and the instrument will still operate properly. The case has a hinged cover so that it cannot be removed.

The Bristol-Fuller valve for controlling the temperature of gas burning equipment was shown in its latest development. It is a motor driven device entirely automatic. The mere pushing of a button, however, converts it into hand control. This apparatus has all standard parts.

The new Bristol-Derr boiler level came in for its share of attention. This indicates and records measurements of water and the instrument is located right on the switchboard with the other instruments. This instrument is being shown for the first time and the inventor is present at the exhibit to demonstrate the advantages of the new invention. Prof. Derr who is now connected with the Bristol Company was formerly a professor at the Massachusetts School of Technology.

Sanford Riley Stoker Co.

The Sanford Riley Stoker Company exhibit their latest type stoker for boilers of from 150 to 500 h.p. This is all under feed and side cleaning which requires no basement.

Motion pictures were also shown at the exhibit of the under feed stoker for big boilers.

Nash Engineering Co.

The Nash Engineering Company exhibited in addition to its usual line a new high efficiency centrifugal pump and a new sewage ejector. A model was shown of the latter with a capacity of 100 gallons in eleven seconds.

This ejector is of wide application and is of ideal application in connection with the operation of paper mills. It is operated by an air blast over the tank of liquor. It is complete, simple and efficient. This is the first time it has been exhibited.

The Crane Co.

The Crane Company has an unusually complete exhibit of their customary line with a new line of cast steel gates, traps, pipe bends and power house equipment.

Spruce Leads in Pine Tree State

[FROM OUR REGULAR CORRESPONDENT.]

AUGUSTA, Me., December 5, 1923.—Interesting facts regarding the timber in the state of Maine have just been given out by the Maine Forest service, which states that there are 11,630,000,000 feet of standing spruce timber within the limits of the state.

Pine, which gave Maine the name of the Pine Tree state, and formerly the most numerous tree in the state, now comes second to King Spruce, with 5,060,000,000 feet, and cedar is third, with 2,781,000,000 feet. Fir is fourth, with 2,288,500,000 feet, and yellow birch next, with 2,033,500,000 feet. There is estimated to be 1,402,500,000 feet of maple, and 880,000,000 feet of hemlock. Poplar is estimated at 1,123,000 cords, and white birch at 1,109,980 cords.

The amount of spruce pulp now standing in the state is believed to be about 9,610,000,000 feet and fir pulp 1,943,000,000 feet. Dry as these statistics may seem to be, they have a direct interest to newspaper readers, as many of the newspapers printed in Boston and New York are made from Maine pulp, manufactured from the pulpwood trees of this state.

Suffers Soft Coal Loss

[FROM OUR REGULAR CORRESPONDENT.]

GARDINER, Me., December 5, 1923.—Several thousand tons of soft coal belonging to the Hollingsworth and Whitney Company had to be moved last week on account of a fire originating from spontaneous combustion. The pile, containing 7,000 tons, caught fire at one end, and slowly burned to the center.

Many Paper Mill Improvements

[FROM OUR REGULAR CORRESPONDENT.]

APPLETON, Wis., December 4, 1923.—A new bleach plant at the Interlake Pulp and Paper Company plant at Appleton is practically completed. The unit, built almost entirely by mill employes, is one of the most modern plants of its kind in the country. Construction work was started late in the summer.

Workmen are making rapid progress on the new papermill of the Riverside Fibre and Paper Company here. The structure, which is of concrete and steel, will be enclosed in a few weeks so that interior work can be carried on during the winter. A warehouse and finishing room also are being constructed near the present fibre mill. The old papermill is to be abandoned when the new structure is completed.

The Marinette and Menominee Paper Company is building a finishing room, 204 feet long and 50 feet wide between the two machine rooms at the Park mills. The end walls of the machine rooms are being used in the new construction. The work will be completed in the very near future and will add several men to the company's payroll.

It is said the next project of the Marinette and Menominee Company will be a new papermill at Menominee adjacent to the present mill. This work will not be undertaken for sometime, however, because of the condition of the paper market.

A large crowd of men is engaged in the big construction project of the Tomahawk Kraft Paper Company, at Wisconsin Dam and at Grandmother Falls. The last span of the big dam across the Wisconsin river at Grandmother Falls was completed a few days ago, and bricklayers now are at work building around the steel superstructure.

Generators and other machinery for the power plant at Grandmother Falls have been shipped and it is believed the work of installation will be started soon. Ideal weather conditions this fall have made rapid progress possible.

Concrete footings have been completed for the seven buildings which will constitute the plant at Wisconsin dam and workmen have started on the superstructure. Bricklayers will be transferred to the sulphate plant when the Grandmother Falls dam is finished.

Interested in Freight Increase

[FROM OUR REGULAR CORRESPONDENT.]

WATERTOWN, N. Y., December 3, 1923.—Paper manufacturers in this section are particularly interested in a general increase in class freight rates by the railroads upon all classes of paper, excepting news print, to be shipped into Southern territory. The schedule was to have become operative on November 30, but the Inter-State Commerce Commission has just been issued a notice suspending the operation of "I. & S. docket 1965," which is the technical identity of the new schedule, until March 29, 1924.

The schedule in question would increase the rates of shipment from local paper mills to Southern points from 25 to 40 per cent, amounting to a very important handicap to competition in that section of the country. H. P. Hanson, manager of the Chamber of Commerce traffic bureau, has been giving the matter much study and has been co-operating with local shippers with a view to meeting the situation.

The Inter-State Commerce Commission announces a public hearing before it on December 17 at Washington. At that time it is planned to have the Chamber of Commerce and local manufacturers represented. The case is being carefully prepared in the mean time.

Rains Help Water Situation

HOLYOKE, Mass., December 4, 1923.—The heavy rains of the past few days have relieved the water situation and the water is now flowing four to five feet over the big dam with probability of no water shortage for the remainder of the season.

NATIONAL CONTAINER MEN PLAN UNUSUALLY BUSY YEAR

Many Activities Outlined at Annual Convention Held in New York City—John L. Barchard of Hummel and Downing Co. Elected President—Standard Specifications for Cloth Tape Adopted—Association Goes on Record for Certain Changes in Freight Specifications—New Form of Box Makers' Express Certificates Accepted—List of Standing Committees Appointed.

The National Container Association held its annual convention at the Biltmore Hotel, New York City, on November 20 and 21. New officers were elected, standard specifications for cloth tape adopted, the association went on record as favoring certain changes in freight specifications, a new form of box makers' express certificate was accepted and the entire membership pledged itself to get behind the organization's program to develop new fields for the use of corrugated and solid fiber containers.

John L. Barchard, of Hummel and Downing Company, Milwaukee, Wis., was chosen the new president to succeed F. J. Kress, retiring chief executive. Col. C. W. Gaylord, of Robert Gaylord, Inc., St. Louis, Mo., was elected vice-president. The new executive committee is composed of the following: J. P. Brunt, Mid-West Box Company, Chicago; James B. Fenton, Buffalo Box Factory, Buffalo, N. Y.; George W. Gair, Robert Gair Company, New York City; W. S. Goodwillie, Atlas Box Company, Chicago; Irving Hill, Lawrence Paper Manufacturing Company, Lawrence, Kans.; Samuel Samuels, American Corrugated Paper Products Corporation, New York City, and Clarence J. Schoo, General Fibre Box Company, Springfield, Mass.

Mr. Barchard, the new president, was president of the Container Club at the time of the formation of the National Container Association and has been vice-president of the National Container Association since its organization in May of this year. He has always taken a leading part in association affairs.

Col. Gaylord, the newly elected vice-president, was formerly a director of the National Association of Corrugated & Fibre Box Manufacturers. He was a member of the committee which conducted the negotiations leading to the formation of the National Container Association and he has been a member of the Executive Committee of this association since its organization.

G. R. Browder was re-elected general manager and treasurer of the Container Association. H. S. Adler, who has been acting secretary since the resignation of B. C. Tamlin, was elected secretary.

Standing Committees Appointed

The following standing committees were appointed by the Executive Committee for the ensuing year: Standardization—Clarence J. Schoo, chairman, General Fibre Box Company; Fred Emmons, Hinde & Dauch Paper Company; R. B. Koken, Scharff-Koken Manufacturing Company; Delaney Logan, Mengel Company; M. W. Waldorf, Waldorf Paper Products Company. Sales Promotion—J. P. Brunt, chairman, Mid-West Box Company; J. J. Brossard, Fort Wayne Corrugated Paper Company; J. M. Connor, Philadelphia Paper Manufacturing Company; Geo. W. Gair, Robert Gair Company; Irving Hill, Lawrence Paper Manufacturing Company. Statistical—F. M. Durbin, chairman, Sefton Manufacturing Corporation; James B. Fenton, Buffalo Box Factory; F. J. Kress, F. J. Kress Box Company; A. J. Redemski, Atlas Box Company; Samuel Samuels, American Corrugated Paper Products Corporation.

Reports Show Progress Being Made

General Manager Browder reported upon the activities of the association since the last meeting. He reported in detail upon a number of classification subjects which are now pending. He also mentioned the activities of the Freight Container Bureau of the American Railway Association, including the recommended specifications for containers for the shipment of boots and shoes. Specific mention was made of a number of package designing jobs turned out by the Chicago Laboratory in the past few weeks. Of particular interest was his analysis of certain freight claim statistics and the showing made in the reduction in freight claims on "package" goods.

Reports of the Standardization Committee was submitted by Chairman W. S. Goodwillie. Included in this report was the recommendation that the association adopt certain standard specifications for cloth tape, which was done. The association also went on record as favoring certain changes in the freight specifications.

In reporting for the Sales Promotion Committee, Chairman J. P. Brunt referred to the work carried on through the medium of the package designing and testing laboratory located in Chicago. In line with President Blanchard's suggested slogan, "Extend the Use of Corrugated and Solid Fibre Boxes," the association has increased its appropriation for Sales Promotion Work, the details of which are now being worked out.

Chairman Brunt stated that under the new program of activities which are being outlined, new fields for the use of corrugated and solid fibre containers will be studied and developed.

Association to Circulate Hand-Book

Announcement was made of the fact that the association expects to issue in the near future for the use of its members a hand-book or catalog containing rather complete information with regard to corrugated and solid fibre boxes.

Dr. E. O. Merchant gave an interesting report on general business conditions and the outlook for 1924. Grafton Whiting reported for the Statistical Committee, furnishing to the members present a folder of charts and summaries applicable to container manufacturing operations.

W. R. Bassett, of Miller, Franklin, Basset & Company, New York City, was the speaker at the luncheon on Wednesday, November 21. His subject was "Economies in Business."

These luncheons were served in the Fountain Room of the Biltmore on each day of the meeting. Following the luncheon on Tuesday, the Hon. Sydney Anderson, Congressman from Minnesota, spoke on "The Relation of Transportation to industry and Agriculture."

New Form of Express Certificate of Box-Maker

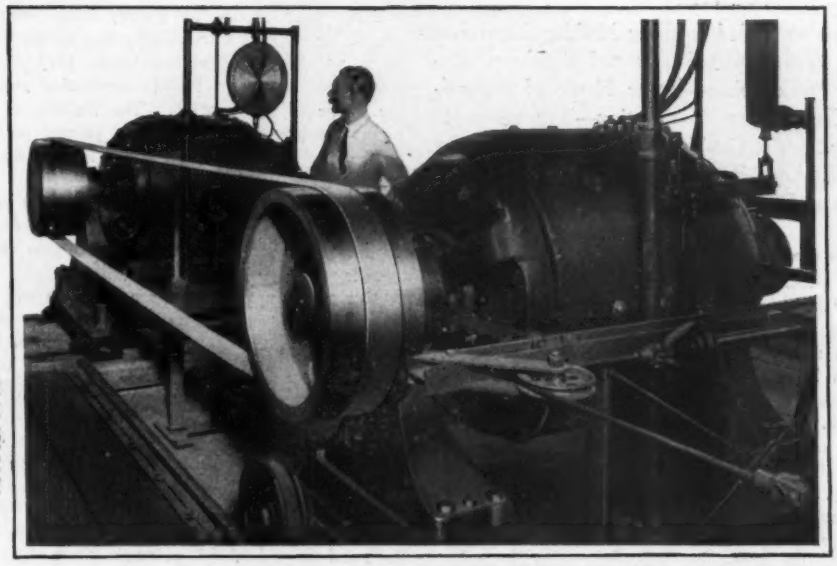
Messrs. Gair and Samuels, the Special Committee which has been handling this subject for the association, reported that the express companies had readily adopted their recommendations with regard to changes in the form of the express stamps. The new form, which is quite an improvement over the old one, designed by the special committee. In accordance with a supplement recently issued by the Express Companies, the use of the new forms will become effective January 1, 1924. Members of the association have already been furnished with reprints of the new design. Arrangements have been made whereby members may procure stamps containing the official insignia of the association.

The next meeting of the National Container Association will be held in Chicago in January the exact time and place to be announced later.

Charles G. Palmer with Hanchett Co.

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Ill., December 4, 1923.—Charles G. Palmer, 1110 Conway Building, who has been Chicago salesmanager of the Hoberg Paper and Fibre Company of Green Bay, Wis., became, on November 15, sales manager of the Hanchett Paper Company of 866-74 Larrabeen street, having entire charge of sales.



Photographed at The Leather Belting Exchange Foundation, Cornell University, where research work on power transmission is being carried on constantly in the interest of industry.

These tests show every plant owner how to save money on belting!

THE photograph above illustrates a test which means a great deal to every buyer of belting. It shows conclusively the comparative efficiency of all types of belts used for transmitting power.

Running under average shop conditions, a 100-H. P. motor drives a 100-H. P. dynamometer. Twenty different types of belts are used, one after the other, to transmit power. These belts are all 4 inches wide and 30 feet long. Each one is put on under the same tension—36 pounds per inch.

A power meter registers the power transmitted by each one. Another meter measures the percentage of "slip," or power lost.

These tests prove, beyond question of doubt, that a good leather belt delivers 40% more power, has a smaller percentage of slip, and a far higher operating efficiency than any other type of belting made.

For instance, assuming the rated capacity of a 4" leather belt to be 20 H. P., it will deliver 24 H. P., or 4 H. P. more than rated capacity, with only 1½% slip. *The best substitute of equal size usually delivers only 14 H. P. with the same percentage of slip.* On an overload, the leather belt ordinarily delivers 43 H. P. with 2½% slip, while a substitute usually gives only 16 H. P.—*less than the rated capacity of a leather belt of the same size.*

A leather belt delivers 40% and up more horsepower than a similar substitute belt. (Tests made at Cornell University, Mellon Institute and The Leather Belting Exchange Exhibits.)

These facts hold true with belts of any width or length—with any pulley ratio—and under any shop conditions. (Except that leather shows to even better advantage in most cases.)

Leather is not only more efficient—it is far more durable; has a high salvage value; can be made positively water-proof—and is, therefore, the most economical, dependable material on earth for transmitting power!

The results of these tests, together with other interesting information on power transmission, are combined in six valuable booklets. These will be sent you free upon request. They tell you how to choose the right kind of belting and how to care for it *to save money.* Simply sign and mail the coupon.

You are also invited to write us regarding power transmission problems. These, whenever possible, will be answered free of charge.

An Interesting Exhibit

The test illustrated above, with 10-H. P. machines and two-inch belts of all kinds, forms a part of The Leather Belting Exchange's exhibit at the

SECOND NATIONAL EXPOSITION OF POWER AND MECHANICAL ENGINEERING

Grand Central Palace
New York City, N. Y.
December 3rd to December 8th

Address—Research Division

THE LEATHER BELTING EXCHANGE, Forrest Building, Philadelphia

The Leather Belting Exchange is not a company operating for a profit or for selling belts. It was organized by the leading leather belting manufacturers of America in the desire to furnish impartial information on leather belting to manufacturers, engineers, and technical schools. It maintains a competent staff of experts in Philadelphia and at Cornell University who will gladly answer questions on power transmission without cost or obligation. In the broader interest of leather, it is affiliated with the leading Sole and Belting Leather Tanners in their nation-wide campaign on leather and the tanning industry. For information regarding leather, itself, address

AMERICAN SOLE *and* BELTING LEATHER TANNERS, 17 Battery Place, New York

Nothing takes the place of Leather

THE LEATHER BELTING EXCHANGE,
Forrest Building,
Philadelphia.

Please send me your six booklets on power transmission — FREE. Also, without obligation, place me on your mailing list for subsequent information developed by your research work on belting.

Name_____

Name of firm_____

Address_____

City_____ State_____

Position held_____

PHILADELPHIA TRADE FINDS CONDITIONS DISAPPOINTING

Final Days of November Failed to Bring Holiday Impetus to Business That Was Expected—General Weakness Prevails in Paper Stock Prices—Paper House of Pennsylvania Issues Bulletin on Cooperation—Typothetae to Entertain Paper Men at Get-Together Luncheon—Charles Beck Paper Co. Adds Sulphite Bonds to List—Federal Reserve Report on Paper.

[FROM OUR REGULAR CORRESPONDENT.]

PHILADELPHIA, Pa., December 4, 1923.—Disappointment was general although not very keen in the fine paper division of the Philadelphia industry during the week for the closing period of November did not bring out nearly as large an amount of business for the holiday season as had been anticipated. Instead there came upon the printing industry during the week preceding Thanksgiving Day a distinct setback. An element of more or less importance in the situation so far as the buyers were concerned, was the shading down of prices on the Hammermill lines, one of the best selling in the printing industry. The immediate effect of the reduction was to strengthen belief that it would pay to wait in placing business and that other lines were due for decline. Distributors do not generally agree with this opinion of their customers, but their arguments have been unavailing in their efforts to turn doubt into orders. Save as noted paper values remain unchanged.

The coarse paper market continued moving spasmodically as during the preceding week. The kraft situation, the most interesting in the coarse paper line, remains unchanged. Buying in this grade has fallen off to a considerable extent since prices dropped.

Weakness Prevails in Stock Prices

In the paper stock market the only lines that are steadily maintaining their prices are hard and soft white shavings. All the other grades are weak in prices. There are some mill inquiries but these are said by the larger dealers to be of the bargain hunting variety-low price offerings which are bringing out only limited quantities of supplies from smaller packers who either have not sufficient storage space or enough capital to hold off. Rag stock on the contrary is strengthening in price because of the diversion of so large a quantity which formerly went to the paper mills to cotton shoddy mills because of the high price of raw cotton. These mills are outbidding the paper mills and there is prospect of a dearth of this grade of stock among the packers, warehouses practically being cleaned up just as fast as enough quantity for shipments is accumulated.

Federal Reserve Report on Paper

Surveying the paper industry generally, the Philadelphia Federal Reserve Bank in Bullein issued yesterday said:

"The paper industry, in general, is in about the same condition as it was in October, but is not as active as in November, 1922. Some grades of paper are in better demand than they were last month, but other grades are in poorer request. Fine papers, particularly bond and writing papers, are more active than they were a month ago, but book papers show little improvement, and mills making these are operating at about 80 per cent of capacity. Buying for the holiday needs has stimulated the wrapping and kraft paper markets, and consequently sales exceed those of last month. But mills' stocks have been reduced only slightly. Manufacturers of tissues, toilet papers, and crepe towels report that business is exceptionally dull for this season of the year and that production at their mills has declined to 50 per cent of capacity. Manila papers and card boards are selling well, and manufacturers of these are operating at close to capacity. Envelopes are in fairly good demand and most factories are running at 85 per cent."

"Co-operation" Keynote of House Organ

The Paper House of Pennsylvania, which publishes a house organ, but edits it altruistically has in the current issue an argument, which the paper distributors very well can carry to their consumers, because it is both convincing and true. It deals with the theme of co-operation. The Bulletin of the Paper House of Pennsylvania says, in an edition printed on the newly introduced Strathmore Charcoal Book paper and in the most suitable of all the new pastel tints the ecrue green:

"We are getting close to the end of the year when the natural tendency is to reduce stocks as far as possible prior to inventory taking, and we have noted that this year more so than last the tendency is being pressed to the limit.

"During the next month or more there will be demand for quick shipments. We have had this condition for some weeks past. We urge, however, the co-operation of the paper buyer with the paper merchant in securing deliveries which will be satisfactory and at the same time allow sufficient time for good deliveries. Paper can be made and shipped quickly but there is always the temptation to make a good shipment; but not always is the paper itself good and entirely up to the quality wanted.

"A little appreciation on the part of the buyer of the necessary human element which goes into paper making and paper handling will result in more satisfaction to all concerned, and paper properly made and properly delivered on the floor of the pressroom will save time in the running and unnecessary delay in the last operations."

Paper Men and Typothetae to Dine

All the members of the Philadelphia fine paper trade will be invited this week by Chairman William Sharpless of the Trades Relations Committee of the Typothetæ of Philadelphia to attend a get-together meeting and luncheon at noon on Thursday, December 6, at the Hotel Adelphia, the specific purpose of the meeting being the Chairman's desire to enlist paper distributors in the printing industry principally but also all other supply men including printing press manufacturers, ink grinders, roller makers, electrotypers, stereotypers and photo engravers in an effort to build up the basis of the existing Credit and Collection Bureau of the Typothetæ, a greater body which shall function for all in the Graphic Arts as completely as does this organization for the printing industry and to a limited extent for the paper industry as well.

Typothetae Stock Collections Extended

The Waste Paper Division of the Typothetæ of Philadelphia, which recently extended the field of its services to cover the membership in the West Jersey Typothetæ and which therefore is collecting paper stock not only in all parts of Philadelphia but as well in southern New Jersey from Trenton south to Cape May and eastwardly to Atlantic City, is engaged in the interest of the Philadelphia paper stock packers and it is probable that, when in the near future, bids for the material available are open, there will be spirited competition. The present contractor for all the waste is the E. D. Hemingway Company. Records of the Division show that a considerable amount of waste paper each month is secured from the plants of the 44 members of the Typothetæ in Philadelphia who belong to the Division. During October the paper waste amounted to 75 tons for which $1,374 was received. Collections for preceeding months were: September 56 tons, August 46 tons, July 45 tons, June 35 tons, and May 57 tons. George W. Weaver, assistant secretary manager for the Typothetæ, is in direct charge of the waste paper division.

Beck Co. Adds Sulphite Bonds

The Charles Beck Paper Company has just made an important departure in its business policy, by rounding out its stock of fine

(*Continued on page 34*)

Is the sewer taking your profits?

ANALYZE your mill effluent, and ten chances to one you will discover a considerable stock loss, depending upon the volume and consistency of water.

A Bird Save-all recovers practically all of the desirable fibres in this waste water and returns them to the system for immediate use.

It is seldom that a Bird Save-all does not pay for itself in less than a year. In most cases the saving runs into thousands of dollars.

In some of the most modern mills all waste water is passed through Bird Save-alls before going to the stream.

The Bird Save-all catalog will be interesting to you.

BIRD MACHINE COMPANY
SOUTH WALPOLE MASSACHUSETTS

Western Representative
T. H. Savery, Jr., 1718 Republic Bldg.
Chicago, Ill.

Canadian Builders of Bird Machinery
Canadian Ingersoll-Rand Co., Ltd.
260 St. James Street
Montreal, Canada

The BIRD SAVE-ALL

Obituary

William Squires Warren

[FROM OUR REGULAR CORRESPONDENT.]

DALTON, Mass., December 4, 1923.—William Squires Warren, age 68, until about a year ago general superintendent of the Crane & Co. paper mills, died last Thursday afternoon at his home, 58 Curtis avenue. He held the position of superintendent since 1889 or 33 years. He was closely associated during this long service with the late Senator W. Murray Crane, the late Frederick G. Crane and Winthrop M. Crane, Jr., and was known as one of the best paper mill executives in Western Massachusetts. He was more particularly known as the head of the mill that produced the government bank note paper.

He was born in Dalton June 21, 1855, son of Caleb Strong and Maria C. Fleming Warren. After attending the high school he went to work in the paper mill of Bartlett and Cutting which was located on the site of the present Centennial mill owned by the Byron Weston Paper Company. After working there for four years he went to the Adams Paper Company, at Adams, and from there to the Fairfield Paper Company at what is now Woronoco, where he had charge of the calendering and loft work. From there he came back to Dalton to work in the Carson and Brown mill, working there seven years. He then took the position of superintendent of the Carew Manufacturing Company at South Hadley Falls for two or three years returning to Dalton in 1889 to take up his long service with the Cranes.

George H. Boakes

[FROM OUR REGULAR CORRESPONDENT]

DALTON, Mass., December 4, 1923.—George H. Boakes, age 45, superintendent of the Crane Old Berkshire Mills, died last Wednesday morning, at the House of Mercy Hospital at Pittsfield, after a few weeks' illness with septic pneumonia. He was born in Westfield, son of Mr. and Mrs. George H. Boakes and had lived in Dalton about 26 years. He was appointed superintendent of the mills on the resignation of F. W. Pomeroy.

Cuban Paper Market

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 5, 1923.—The Paper Division of the Department of Commerce has the following interesting report on the Cuban paper market from Trade Commissioner Livengood, at Havana.

As a result of investigations made in Cuba, it has been learned that notwithstanding the preferential treatment of imports from the United States, under Cuban tariff laws, American paper products are being underquoted by European mills. In some lines this fact has led to a serious undermining of American trade.

The fact that American mills can make quicker and more certain deliveries enables the American exporter to withstand a certain amount of underselling, but with the prices now prevailing the Cuban buyers are willing to risk the uncertainties of delivery in order to avail themselves of the low prices offered by European manufacturers.

Disproportionate freight rates have aided the European mills in offering their low prices in addition to the lower manufacturing costs. An example of this is seen in the fact that freight rates from Christiania to Havana are no higher than from New York to Havana.

A few instances will serve to indicate the state of the market. When American news print was recently quoted at $4.00 in rolls per 100 pounds f.o.b. New York, Scandinavian news was offered at $3.70 per 100 pounds C.I.F. Havana. Similarly, while American news in reams was priced at $4.25 to $4.50 per 100 pounds F.O.B. New York, Finnish paper was quoted at $3.95 C.I.F. Havana. It should be noted that news print is admitted free of duty so that the American papers do not have the advantage of the preference granted American products by the Treaty of Reciprocity. Glassine, which is very popular at present in Cuba, has always been a European specialty, though American manufacturers competed in the market during the war period. At present, American glassine is practically driven from the market by the German price of around 7 cents a pound C.I.F. Havana, as compared with the American quotation of 12 to 14 cents per pound, F.O.B. New York.

In bonds, certain well-known grades of American manufacture continued to be sold in spite of foreign competition, but in the cheaper qualities, for which there is the greatest demand, European bond is offered at prices beyond competition. When American bond was quoted at 9½ cents to 10 cents per pound F.O.B. New York, European bond, said to be of equally good quality, was sold at from 6½ to 8 cents per pound C.I.F. Havana, watermarked, and at from 6¼ to 7 cents per pound without watermark. Bonds of very cheap grade which American dealers cannot offer at less than 8 cents per pound F.O.B. New York, face competition with European paper of similar grade at prices as low as 5 cents per pound C.I.F. Havana.

A very popular paper in Cuba for all-around printing purposes is M. F. Book paper, locally known as "satinado." A common weight is 40 pounds on a basis of 500 sheets, 24 by 36 inches. The market for this paper was long distinctly American, now Belgian and German houses are controlling the market. Typical prices are: European, C.I.F. Havana, $4.80 per 100 pounds; American, F.O.B. New York, $7.00 per 100 pounds.

PHILADELPHIA TRADE

(*Continued from page 32*)

papers by the addition of a line of low priced sulphite bond. For many years this firm specialized particularly in all the higher and more expensively priced printing paper, paying not so much attention to the medium and low price lines. It has decided, however, to make its stock of printing papers completely representative and the first important step in that direction was taken during the week by the addition of its own brand, Vesta Bond, an unwatermarked paper which sells at ten cents per pound for white in case lots and a trifle more for the blue, buff, canary, green and pink, and at 13 cents for the goldenrod.

News Notes of the Trade

F. J. Hastings recently appointed Philadelphia representative of the American Writing Paper Company to succeed the late William B. Snyder, has recovered from an illness which for several weeks kept him at his home. L. B. Springsteen of the American Writing Paper Company called on many in the trade during the week.

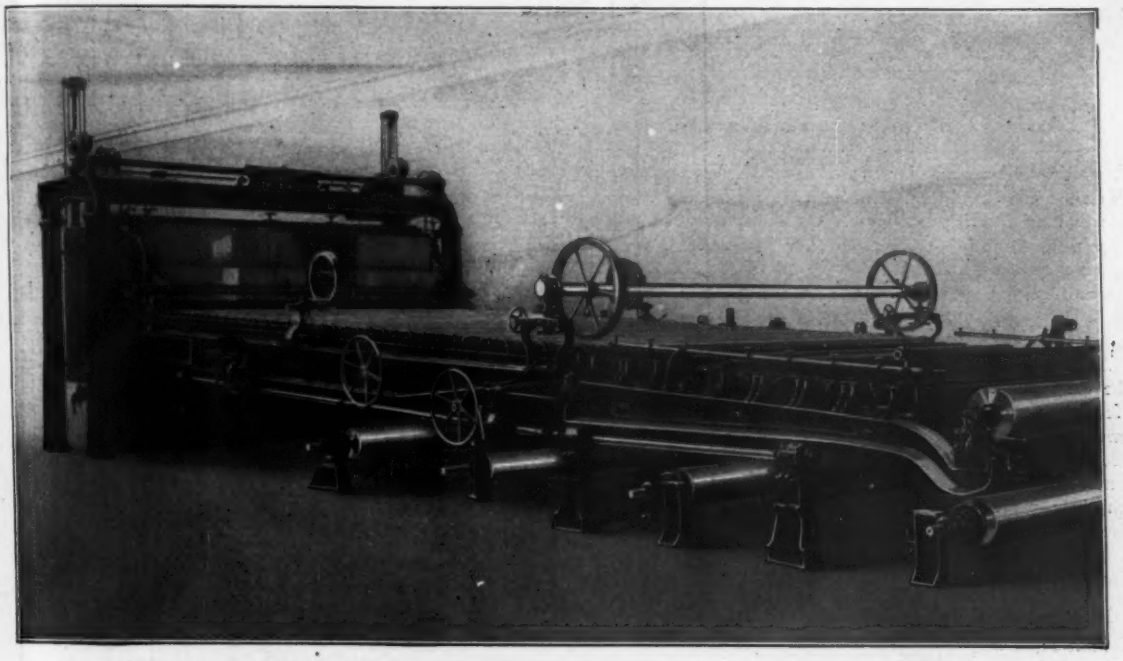
For the present the Hemingway Company whose paper warehouse at 243 Elbow Lane was completely destroyed by fire will remain at 150 N. Front street where a temporary location has been secured for the storage and sale of paper stock. The new location is under the management of Lisle Owen, who was also in charge of the old quarters. Edward D. Hemingway head of the firm, who was occupying his camp in the Maine woods, returned to Philadelphia following the destructive fire and will remain here until after the holidays when he will leave for his winter home in Florida.

A permit has been granted to the Philadelphia Paper Manufacturing Company for the extension and improvement to its plant in Manayunk at a cost of $10,000.

M. M. Pringle of the Philadelphia branch of the Seaman Paper Company, has sailed for Europe where he will remain on a three months' pleasure trip touring the continent and the British Isles. He was accompanied by Mrs. Pringle.

Harry J. Fleming, head of the H. J. Fleming Paper Company, who is on a honeymoon in California, will return to Philadelphia the latter part of next week.

Increase Your Sales $13,500 per year
Decrease Your Labor $420 per year
By Using the
BELOIT REMOVABLE FOURDRINIER [patented]



By Assuming the Following Figures in Changing Wires
The Above Results may be Obtained

4 Hours Required on Old Type Fourdrinier
Less 1 Hour Required on "Beloit Removable"
Means 3 Hours Saved on each Wire Change
20 Wires Changed per Year
Means 60 Hours Saved per Year
Or 180 Tons paper at 3 tons per hour
180 Tons @ $75.00 per ton = $13,500
10 Men on average required on Old Type Fourdrinier or 40 man hours
5 Men required on "Beloit Removable" or 5 man hours
35 man Hours Saved per change
20 Changes - 700 Hours - at 60¢ per hour = $420

Beloit Iron Works **Beloit, Wis., U. S. A.**

Established 1858

SPIRIT OF CAUTIOUSNESS CONTROLS CHICAGO MARKET

Consumers Continue to Take Stock on Hand-to-Mouth Basis —Overproduction in Toilet Tissues Reported—Moser Paper Co. Tests Value of Vehicle Publicity—Many Paper Men Visit Bradner-Smith Building—Missouri Valley Wrapping Paper Men Meet—Lenox Paper Box Co. Incorporates For $15,000—Paper Industries Exchange to Be Succeeded by Boxboard Association.

[FROM OUR REGULAR CORRESPONDENT.]

CHICAGO, Ill., December 5, 1923.—That cautiousness which has characterized buying of paper stocks in the Chicago market for the past several weeks still controls the situation here. Consumers are taking stock on the same hand-to-mouth basis. Stocks in the hands of merchants and printers are not large. On the contrary, they have been permitted to decline to unusually low levels. Mills are not running on normal schedule. Practically all of them have a certain percentage of their machines shut down.

The drop in prices on sulphite bonds predicted by some paper concerns in Chicago a week or so ago, has actually taken place This week finds them in effect on some of the nationally known brands. The cut also affects sulphite ledger which like the bond declined a few cents a pound.

Paper towels and toilet tissues are claimed to be vastly overproduced. It is said that production of toilet tissues is about 125 per cent of normal. This is the opinion of a Chicago house which handles both these paper products almost exclusively. For this reason the market is demoralized, converters of toilet tissue into the finished form being credited with selling it for less than it can be bought from the mills direct.

Moser Cashes in On Delivery Vehicles

Value of vehicle publicity is keenly appreciated by the Moser Paper Company, Chicago, of which P. A. Van Vlack is president. Here and there around the metropolis may be seen the green colored wagons of the firm delivering orders. The particular type of wagon used is the single horse high stake variety. A bright green pervades the wagons with the name of the Moser Paper Company in gold letters toward the front. The value of this color is in its ability to attract attention upon the city's thoroughfares. Then when people look at the wagons they are almost compelled to read the company name which sticks in their minds thereafter.

Visit New Bradner-Smith Building

Paper men from all over the country have made special sojourns to Chicago purposely to go through the new building of Bradner-Smith & Co., at the corner of Van Buren and Desplaines streets. Many of these were informed of the completion of the edifice through the columns of the PAPER TRADE JOURNAL. Officials of Bradner-Smith are happy to show off their new headquarters for they believe that it is one of the most modern and efficiently arranged in the entire paper industry.

The new structure completes the firm's building program at this location for some time. It is 100 by 150 feet in size and seven stories high. It joins two other buildings at the same location. The offices are on the seventh floor. Each floor is given over to various kinds of paper stock.

Very little new machinery was purchased for the new building. The old units used at the former location on Monroe street were moved over and together with those already in operation at the present place, the battery was adequate for the need. James T. Edwards, of Bradner-Smith & Company had complete charge of construction of the new building.

Wrapping Paper Men Meet

An enthusiastic gathering of wrapping paper men was held November 16 and 17. It was the annual meeting of the Missouri Valley Wrapping Paper Association held at the Elms Hotel, Excelsior Springs, Mo.

The sessions were presided over by President S. J. Hodgins. N. A. Schoenbucker and Charters K. Higgins of the National Paper Trade Association addressed the sessions. George K. Gibson, Chicago sales manager for the Wausau Sulphate Fibre Company, was also a speaker.

Saturday was given over to a "bogey" golf tournament. Considerable amusement was afforded the members, when it was found on checking over the result, that Messrs. Higgins and Schoenbucker, both playing in a foursome, had won a prize.

Saturday evening the usual week-end dance was held at the Elms Hotel, at which men of the paper trade were present. Doc Edmonds, Dick Crotteau and Charley Duncan were also in evidence at the Elms Hotel.

Two Meetings Held in Pittsburgh

A meeting of the Central States Paper Trade Association was held in Pittsburgh, Pa., on Tuesday, at the Pittsburgh Athletic Club. A meeting of the local wrapping paper merchants was held, at which Charters K. Higgins, assistant secretary, spoke.

Lenox Paper Box Company Incorporates

The Lenox Paper Box Company has been incorporated with a capital of $15,000 to operate at 426 S. Clinton street, Chicago. This company was formed to succeed the Round Paper Box Company, which several years ago was organized to manufacture round boxes, particularly for the millinery industry. The Lenox Paper Box Company will manufacture square boxes, of the set-up variety, and also the round boxes. The incorporators are: Anna Felman, Sol Wassonman, Alex Felman, George Stein and Herman L. Stein. Correspondent: Samuel L. Freedman, 105 N. Clark street.

Gumbinsky Sells Interest in Lamp Plant

It is reported in the Chicago territory that V. L. Alford, former vice-president and director of sales of the Simmons Bed Company, Kenosha, Wis., has taken over the interest of Oscar Gumbinsky, of Gumbinsky Bros. Company, large paper stock company in Chicago, in the International Lamp Corporation, and will be elected chair of the board at the next meeting of the board of directors.

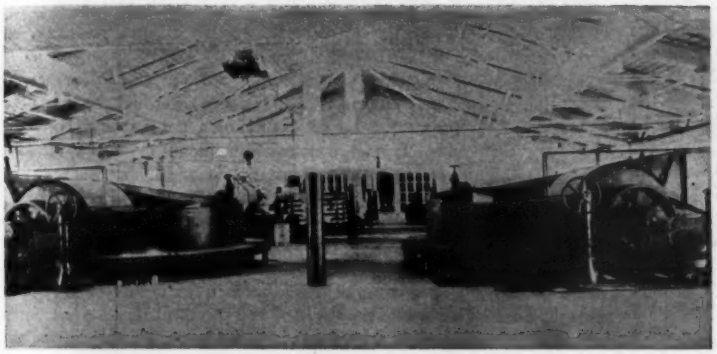
Succeeded by Boxboard Association

An official announcement made by John R. Mauff, executive vice-president of the Paper Industries Exchange is to the effect that the activities of the exchange as at present conducted will be terminated and that on or about December 10 the paper board group, under a new organization to be known as the Boxboard Association, will carry on and function in the same quarters in the Wrigley Building and under the same executive management. Mr. Mauff said also that under the new plans the various groups, other than the paper board group, will retire from the organization.

At the close of the Exchange session on Friday, November 30, a meeting of the liquidating committee was called to consider action in accordance with plans for reorganization. A meeting to bring about the reorganization has been called for December 10, at the Drake Hotel.

It became known also on Friday that some criticism of the action of the board of directors has developed among members of the various groups and that a movement is now on foot for a new organization to enable exchange trading. It has been reported that a number of members active in the organization of the Paper Industries Exchange are active in the new plan. Application for a charter has been made under the name of the Waste Materials Exchange, Inc., and approved by Secretary of the State, according to report.

Famous Product Series No. 2.



Valley Iron Works Company Epuipment *is used in making* Scottissue *Towels*

Ever since the above picture of "Thirsty Fibre" appeared in the advertising columns of the Saturday Evening Post and other magazines with national distribution, every one of the millions of magazine readers know "Thirsty Fibre," and they know that he makes Scottissue Towels dry. A big factor in making him so successful a gentleman is the high grade equipment used in the plant of the Scott Paper Co. A battery of six Niagara Beaters help in producing Thirsty Fibre Towels.

Valley Iron Works Company

Plant:
APPLETON, WIS.

New York Office:
350 MADISON AVENUE

Builders of Niagara Beater, Fourdrinier and Cylinder Paper Machines, Wolf Chippers, P. A. P. A. Rotary Pulp and Paper Screens and other High Grade Paper and Pulp Mill Machinery.

Niagara Beaters

Niagara Beaters save power, time, labor, floor space and besides make a better product. A letter to us will bring you full information regarding the cost saving possibilities of Niagara Beaters.

MONTREAL STOCK EXCHANGE SEES PAPER STOCKS BOOM

Securities of Five Paper Companies Increase $8,000,000 in Ten Days' Time—Prospect of Mergers Said to Be Responsible for Rise in Values—Price Brothers Reported to Be Negotiating for Purchase of Saguenay and Chicoutimi Companies—Ralph P. Bell's Letter on Proposed Embargo Arouses Much Interest—Union Bag Corporation Loses Freight Appeal.

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., December 4, 1923.—A remarkable rise in the market value of pulp and paper securities on the Montreal Stock Exchange has drawn widespread attention to Canada's pulp and paper industry during the past week. In the 10 days prior to the time of writing the listed stocks of five paper companies have appreciated in value by over $8,000,000. This marked attention to the speculative value of the securities has been accompanied by the usual crop of rumors in regard to mergers which are stated to be pending. For instance, the old rumor about the possibility of a merger between the Spanish River Pulp and Paper Company and the Abitibi Power and Paper Company has been featured and it has been stated with every show of assurance that further negotiations have taken place in respect to the long-talked of merger of the Laurentide and St. Maurice paper companies. Apart from these rumors, however, it is felt by those in a position to speak with authority on the subject that the upward movement is based on sound principles of unrealized market values and something more than a mere speculative flash in the pan. The paper industry as a whole was never operating under sounder or more stable trade conditions than at present and the prospects are for a lengthy continuation. While there is a great deal of discussion in the Street of impending amalgamations of which little is definitely known as yet, it is believed that such will be the tendency of the future. It is calculated that if Canada is to realize to the fullest extent the great advantages which this country possesses in its rich and extensive natural resources relating to the pulp and paper industry it will be necessary to form some strong groups having first regard to operating districts and markets for finished products. It has long been felt that this is the normal destiny of the industry in Canada and it will embrace many advantages.

The five companies which have participated most markedly in the upward movement are Abitibi, Brompton, Laurentide, Spanish River and St. Maurice. At the end of the second week of November the market value of the six issued stocks of these five paper companies was $67,182,048. Ten days later these six stocks were worth on the Stock Exchange $75,560,272. This is a rise in value of $8,378,228, in ten days, or at the rate of over $830,000 per day for the period. The six stocks in question at the high price levels established in the early part of this week showed an appreciation of nearly $30,000,000 over the low levels established in the early part of 1922, so that in a period of practically fifteen months a rather spectacular change in the market position has taken place for this group of stocks, and were the movement spread out evenly over the period, the appreciation in values would have been at the rate of about $2,000,000 a month. In the following table values at the low of 1922 and the high of this month are contrasted, the gains being indicated:

	Shares Issued	Market Value 1922 Low	Market Value Recent High	Gain in Market Value
Abitibi	250,000	$7,500,000	$16,031,250	$8,531,250
Brompton	140,000	2,100,000	5,985,000	3,885,000
Laurentide	288,000	20,024,000	26,568,000	6,544,000
Spanish River	94,470	5,054,045	9,423,382	4,369,337
Spanish River, pfd.	86,186	5,774,462	9,178,749	3,404,287
St. Maurice	78,999	5,529,930	8,373,894	2,843,964
Totals		$45,982,437	$75,560,275	$29,577,838

Price Bros. May Buy Saguenay

It is stated by the *Financial Times* of Montreal that negotiations have been entered into with a view to Price Bros. and Company taking over the Saguenay and Chicoutimi Pulp companies, as a result of the change in relations between Becker & Co. and the Saguenay and Chicoutimi companies. This information is passed on for what it is worth. One of the advantages for Price Bros., it is pointed out, would be the very valuable pulpwood limits of Saguenay, comprising some 450,000 acres of freehold. There are also valuable water powers concerned. The Chicoutimi mills produce groundwood pulp and the suggestion has been made that Price Bros. might locate a news print mill at Ha! Ha! Bay using the sulphite pulp now produced by the Bay Sulphite Company. This would give a real dockage for ocean vessels, much superior to the Saguenay location some nine miles further up the river. Price Bros. are now completing the first unit consisting of 200 tons daily capacity for news print out of a proposed 600 tons a day increase.

Complication in Proposed Embargo

Considerable interest has been raised by a letter sent to the press by Ralph P. Bell of Boulden Wood, Halifax, in which he says:

"At the hearings of the Royal Commission on pulpwood in the Maritime Provinces, it was conclusively shown by the evidence of practical lumbermen, both in Nova Scotia and New Brunswick, that an operation for either sap-peeled or rossed pulpwood distributes as much money in the district in which it is carried on as does the ordinary lumber and saw-mill operation. What justification, then, can be urged for a measure which seeks to restrict the exportation of one and not the other? Where cost of production, applied to some common unit of measurement, is as great for sap-peeled or rossed pulpwood as for rough sawn lumber, can a government fairly say:

"'You, A, may not sell your wood in a round stick to an American pulp and paper manufacturer, to make pulp or paper with. But, you, B, may, nevertheless, continue to sell your wood in a square or flat stick to a Cuban or South American to build a shack with.'"

New Wharves for Spanish River

The Spanish River Pulp and Paper Mills have announced that they will build a new slip and wharves on the river front just below their general offices at Sault Ste. Marie. The slip will be 800 feet long and 200 feet wide, and will cost approximately $400,000.

Union Bag Loses on Appeal

An adverse decision has just been given by the Railway Commission in a case of long standing, in which certain United States paper interests endeavored to secure authority for a refund of freight rates upon pulpwood. The application was made by the Union Bag and Paper Corporation of New York in regard to freight rates on pulpwood from Canadian points to the applicant's mills at Hudson Falls, N. Y. The case began about four years ago and referred to increased tariff put into force in 1918. An interim judgment referred the company to the Interstate Commerce Commission, for remedy of its claim. The Canadian Railway Commission has now given its decision that it has not power to direct refund of freight rates, and that the increased freight rate against which the company complained was not illegal.

Move Against Lumber Export

Urging that British Columbia timber should be manufactured in the province before being exported, Kenneth Duncan, member for Cowichan in the British Columbia Legislature, moved a resolution requesting a heavy export duty be imposed by the Dominion on all unmanufactured timber shipped out of the country. Supporting his resolution he stated that B. C. timber was the finest on the continent and that foreign capital was entering the province and

(*Continued on page* 40)

Established 1886

Experience

The world of science and invention has progressed to the point where it is both possible and practicable to find a substitute for almost anything.

No one, however, has yet been able to offer a substitute for that which we have learned to call "Experience." Ability, integrity and responsibility are expected of every business organization—and they are sterling attributes, indeed. But it is experience which is the mother of wisdom and discretion, pointing out the paths to be chosen and the methods to be adopted.

May we remind you that this is our thirty-seventh year?

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CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade-mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

LIBERTY—No. 184,564. Royal Card and Paper Company, New York City. For stationery.

WHITE OAK—No. 185,066. Joseph Weil and Sons, Chicago, Ill. For wrapping paper.

NORTHERN BEAR—No. 184,356. Northern Paper Mills, Green Bay, Wis. For toilet paper.

DANDYROLL—No. 171,392. W. M. Temple, Mason City, Iowa. For paper.

English Interests Buy Timber Limits

[FROM OUR REGULAR CORRESPONDENT.]

MONTREAL, Que., December 5, 1923.—The most important deal in timber lands in the Province of Quebec in many years was conducted by the Provincial Government in Quebec on Friday last, when a block of timber lands located in the basin of the Manicouagan River limits of a total area of about 2,500 square miles was sold by public auction to English interests, said to include Lord Rothermere, who already has large areas of timber limits on the North shore.

There were two bidders, who had deposited $250,000 a few days ago, the Ontario Pulp and Paper Company of Thorold (American interests) and English interests represented by Frank Clarke. Only two bids were made, the first five cents over the stumpage dues of $2.70 and whatever amount they may be in the future, by the Ontario Pulp and Paper Company, and the second of ten cents, putting the price of stumpage dues at $2.80 which was made by Mr. Clarke and was accepted.

The successful bidder will have to pay $1,000,000 in three instalments, the first on the day the contract is signed, the second in one year and the third in two years, interest in the meantime being at the rate of 6 per cent. In addition the ground rental is set at $6.50 per square mile, making a total of $16,000 per year. The successful bidder also will deposit $50,000 to guarantee the fulfilment of the conditions, which include the construction of a pulp and paper mill in one of the large centers of the Province.

The Government reserves the right to dispose, as it may see fit, of the water powers situated in the above timber territories as well as the lands necessary for their exploitation and development. It is interesting to note that the Manicouagan River, which is on the property, is next to Niagara in the matter of potential hydraulic energy. The lessee must, within a period of five years from date of contract, erect within a radius of eight miles from one of the cities of the Province of Quebec, a pulp and paper mill of a daily capacity of two hundred tons of pulp and 100 tons of paper. He must before the expiration of seven years, following the date of the contract, bring the daily production of this mill up at least 200 tons of paper.

Out of the guarantee deposited by the lessee, a sum of $200,000 must be applied as part payment of the price of adjudication and the balance, namely $50,000, will be retained by the Government as a guarantee until the pulp and paper mill be erected, enlarged and in full operation, within the delays specified above. Provision is made that if the lessee has fulfilled the obligations imposed, this amount of $50,000 shall be remitted to him, but if he has not done so, the said sum of $50,000 shall be confiscated by the Crown, and the Lieutenant-Governor in council will also have the right to cancel the contract and the permit to cut timber without any indemnity. All the timber cut on the territory must be converted into pulp and paper at the mill to be erected in accordance with the specified conditions and not elsewhere.

From one of the parties interested, it was learned after the sale that a capital of $15,000,000 will be invested in the development of the acquired limits.

In addition to these blocks of land, small lots were sold in Metepedia region, the bidding in the latter case reaching $3.30 over the upset price of $2.70. This area, however, was very small and they were adjudicated to Mr. Galland. In the Gaspe Peninsula, three and a half square miles of land were sold at a price reaching twenty-five cents over the original $2.70. In this case the successful bidder will have to pay one thousand dollars per square mile as a bonus. Burnt timber in the Abitibi region was sold at five cents over the stumpage dues of $1.50 but the sale of several of the lots was withheld.

Visit American Company's Plant

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., December 4, 1923.—A party of stockholders on the stockholders' committee of the American Writing Paper Company paid a visit to the Holyoke plants last Thursday and inspected them at length. The number included M. C. Jones of the Bankers Trust Company of New York, chairman of the committee, and Murray H. Coggshall also of New York. The information that they received first hand is expected to be of value to them in the plans for the reorganization of the Company about the middle of next month.

Open Large Warehouse

BOSTON, Mass., December 4, 1923.—P. H. Graham and Sons Company of 119-123 East Dedham street has just opened the largest waste paper packing warehouse east of Chicago and cordially invites all who are connected with the trade to visit it and make an inspection.

MONTREAL STOCKS BOOM

(*Continued from page* 38)

acquiring the best forest holdings whereas if manufacturing was done here work would be provided for hundreds of men and five new saw-mills with a daily capacity of 125,000 feet would be needed to handle the timber exported in the log in 1922. He further stated that eight new standard mills of 250,000 feet capacity daily had been erected on the American side of Puget Sound, that timber from B. C. forests was largely going into these mills.

Canadians Own 70% of Pulp Securities

Contrary to an impression that is prevalent, Canadian capital dominates the Canadian pulp and paper industry. American capital, while important, does not reach the high figures that appear in unofficial estimates. At the end of 1921, according to figures supplied by the Dominion Bureau of Statistics, there were outstanding in Canada, securities to a par value of $404,768,480 of the various pulp and paper companies. Of this total $277,357,811 or 68 per cent were held in Canada. Another $74,079,235 were held in the United States, or 18 per cent of the total. British investments totalled $11,936,785 or less than three per cent, while in other countries holdings totaled $41,394,649 but this included $27,257,979 of unapportioned securities such as bearer bonds where the actual ownership is not easily determined. A very high proportion of these would be held in Canada, bringing the actual Canadian ownership close to 75 per cent. Of stocks outstanding, to the amount of $320,898,700, Canadian holdings total $236,767,346, United Kingdom holdings $4,796,354, and American $56,929,400. Of British bonds outstanding to the amount of $78,599,847. Canadian holdings total $38,714,256 (in addition to bearer bonds), United Kingdom holdings, $6,876,431, and American $16,517,135.

YALE ELECTRIC HOIST

THIS Hoist, with an I-Beam trolley system as illustrated above, enables one man to handle heavy rolls of paper, and transfer them to any part of the plant served by the overhead I-Beam track. He can do it quickly, and with perfect safety to the load and workman. Short headroom enables him to lift the load almost to the ceiling.

Yale Electric Hoists, from hook to hook a line of steel, are furnished with motors for any voltage, phase and cycle. All gears and other working parts are fully enclosed and operate in a bath of oil.

Every part is easily accessible. Automatic top and bottom stops prevent overtravel in either direction.

The Yale Model 20 Electric Hoist with I-Beam Trolley is the modern hoisting *and conveying* system.

YALE

Chain Blocks, Electric Hoists } For Lifts

I-Beam Trolleys, Industrial Trucks } For Shifts

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Makers of Yale Products: Locks, Door Closers, and Material Handling Equipment

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Yale Made is Yale Marked

YALE Hoisting and Conveying Systems

Recent Incorporations

R. A. BONINE, Brooklyn, New York, to manufacture paper boxes. Capital stock, $100,000. Incorporators: F. Frasch, D. Kraus, R. Margolies.

H. B. WADSWORTH, New York City, New York, to manufacture paper products. One hundred shares common stock, no par value. Incorporators: M. Lieberman, E. Stern, S. Reitberg.

CONSUMERS' PAPER AND SUPPLY COMPANY of 724 Paterson avenue, West Hoboken, New Jersey. Capital stock authorized, $10,000 with $2,000 paid in. Incorporators: Israel Schwartz, Nellie R. Winokur and Abraham Winokur, all of Jersey City.

L. P. Rieger with Elam Paper Co.

DAYTON, Ohio, December 5, 1923.—Announcement has been made that L. P. Rieger has resigned as secretary-treasurer and director of the Peerless Paper Company, to accept the offices of vice-president, treasurer and director of the Elam Paper Company.

Mr. Rieger has been connected with the Peerless Paper Company for six years, and was formerly affiliated with the Mead Pulp and Paper Company for a period of eight years. He is well known in

L. P. RIEGER

the paper industry, having introduced to the trade the well-known mill brand of "Stillwater Bond" made by the Peerless Paper Company.

In affiliating himself with the Elam Paper Company, Mr. Rieger is entering a field with which he is by experience well fitted. He has been instrumental in moving the plant of the Elam Paper Company from Marion, Indiana, to Dayton, where it will be in the heart of the paper industry.

The coming of the Elam Paper Company to Dayton, along with the McCall Publishing Company of New York, is further testimony of the paramount position that Dayton and the Miami Valley occupy in the paper world.

Mr. Rieger has announced that the Elam Paper Company will be set up and in operation in Dayton the early part of the new year.

S. L. Elam is president and general manager, and Virgil Schaeffer is secretary and attorney.

This company employs 250 persons, most of whom it is thought, will come to Dayton with this plant.

Atlanta Office for Robinson & Co.

Dwight P. Robinson & Co., Inc., of New York, have opened an Atlanta office in the Healey Building, with W. Rawson Collier in charge. Mr. Collier was for many years with the Georgia Railway and Power Company. He joined the Dwight P. Robinson forces several months ago, coming to them from the Poughkeepsie Gas and Electric Company. He is a graduate of the Massachusetts Institute of Technology, and has been prominently identified with the work of the National Electric Light Association, the American Institute of Electrical Engineers, the American Gas Association and the Illuminating Engineering Society.

The opening of the Atlanta office gives the company a total of eight branches. Other branches are at Chicago, Pittsburgh, Youngstown, Philadelphia, Montreal, Los Angeles and Rio de Janeiro.

Among the company's recent activities in the south are the new wet-process cement plant of the Lehigh Portland Cement Company at Birmingham, Alabama; extensions to the steel plant of the American Rolling Mill Company at Ashland, Kentucky; extensions to the power generation and distribution systems of the New Orleans Public Service, Inc., New Orleans, and the design and construction of the fifth sulphur mining plant which they have built for the Freeport Sulphur Company at Hoskins Mound, Texas. The company is also arranging to build a 300 room club-hotel at Palm Beach, Florida.

Bangor Loses Its Lumber Fame

[FROM OUR REGULAR CORRESPONDENT.]

BANGOR, Me., December 5, 1923.—Encyclopedias of a generation ago rated Bangor, Me., as the second greatest lumber manufacturing city in the world, Chicago being first at the time, but Bangor's fame as a lumber center has been dwindling steadily for many years, the climax being reached a few days ago, when Morse & Co. closed down their saw mill and sawed up their booms, marking the closing down of the last tidewater mill on the Penobscot river, and what is apparently the end of an industry that made the city famous. From an average of handling 80 million feet of logs at the Bangor boom in a year, the amount has gradually dropped year after year to this year's amount, two million, the smallest on record.

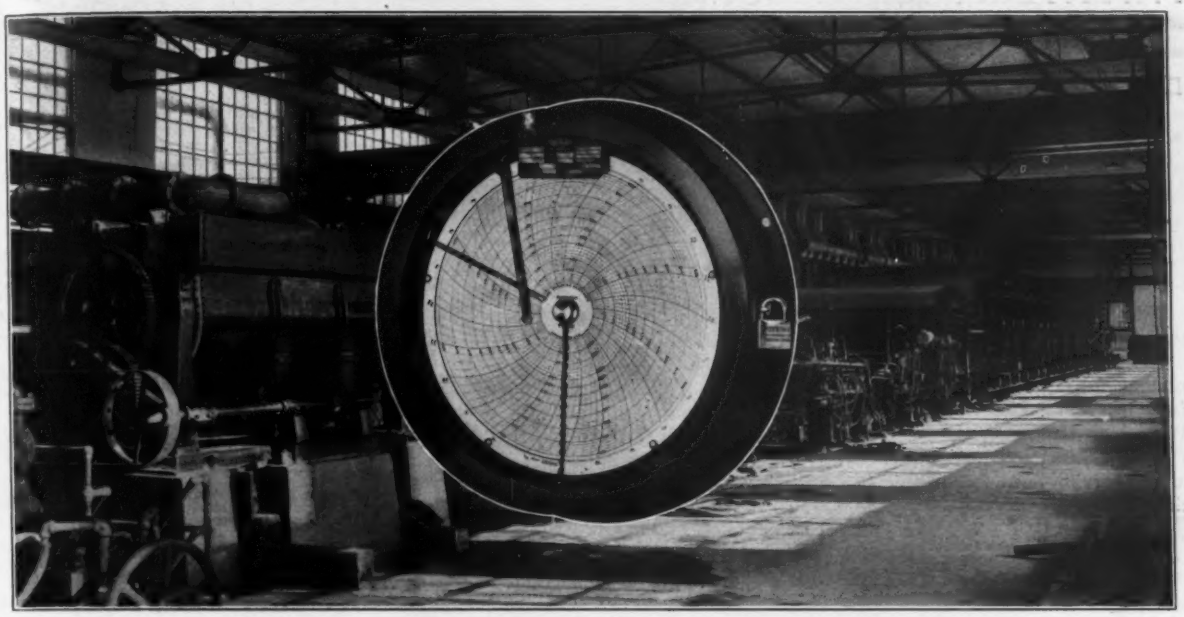
The passing of the saw mills does not mean any diminishing of Bangor's prosperity, however. Numerous small industries have grown up here, there are large wholesale houses, headquarters for big pulp and paper companies, and numerous mills. Within a 15 mile radius of Bangor are located pulp and paper plants making most of the common varieties of pulp and paper manufactured in the United States. The population is larger than ever before, and there are more individual income tax returns filed in Bangor than in any other city in the state except Portland. The city also boasts several large financial institutions, with a very high rating.

Black River Water Flow

WATERTOWN, N. Y., December 3, 1923.—The water flow in Black river is now the most satisfactory it has been since flood time last spring. The ponds of factories along the stream are all filled with water rushing over the dams.

E. S. Cullings, secretary of the Board of the Black River Regulating District, who maintains a daily record of the river flow, said Saturday that prospects for the winter season are the most optimistic they have been in many years.

"The heavy rain a few days ago soaked into the ground, but the fall of the past few days has been running into the streams," he said. "The fortunate feature about it is that it rained in the Adirondacks also, instead of falling in the form of snow. This brings the water level in the ground up to normal level. There is little probability of the frequent winter shortage of water and lack of power for wheels along Black river and its tributaries."



Can You Measure the Efficiency of Your Paper Machines?

Temperature in the dryer rolls.
Pressure and Vacuum in each section of the machine.
Speed of the dryer rolls.

Complete, accurate knowledge of these three items makes possible more uniform production with reduced steam consumption.

Foxboro Recording Thermometers, Gauges and Tachographs are designed to give you this knowledge.

Thirty years of experience in instrument design, skilled craftsmanship and tests that assure years of accurate, dependable service are back of every Foxboro Instrument.

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Write for Bulletins BH-104-1, BH-98-2 and BH-61-2.

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Special Dryer Roll Attachment

In order to obtain exact temperature in the dryer rolls a special fitting has been designed. The thermometer bulb is inserted through the journal by means of a stuffing box and clamp.

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THE COMPASS OF INDUSTRY

6052

PAPER AND PULP PRODUCTION DURING MONTH OF SEPTEMBER

Data Collected from Varied Sources Shows Total Paper Production Was 422,507 Tons with Stock on Hand at End of Month Amounting to 197,342 Tons—Comparative Report of Operations of Mills for September and August—Production of All Grades of Pulp Amounted to 186,640 Tons with 84,097 Tons on Hand at Close of Month—Other Interesting Data.

The statistical summary of the paper industry is submitted herewith for the month of October, 1923, and previous months.

The following associations co-operate in the collection and compilation of data from their members, namely: Binders Board Manufacturers' Association, Converting Paper Mills Association, Cover Paper Manufacturers' Association, Newsprint Service Bureau, Tissue Paper Manufacturers' Association, Wrapping Paper Manufacturers' Service Bureau and Writing Paper Manufacturers' Association.

Tonnage Summary

Grades	Number of mills	Stocks on hand first of month Net tons	Production Net tons	Shipments Net tons	Stocks on hand end of month Net tons
News Print:					
October, 1923	67	24,755	122,073	124,894	21,934
September, 1923	67	24,694	110,209	110,240	24,663
August, 1923	67	22,243	132,604	129,173	25,674
July, 1923	67	19,791	125,768	124,322	21,237
June, 1923	65	18,133	133,692	132,311	19,514
Book (M. F., S. S. C. & Coated):					
October, 1923	63	20,903	52,480	51,348	22,035
September, 1923	64	24,919	51,205	50,453	25,671
August, 1923	61	22,935	59,744	58,708	23,971
July, 1923	56	23,053	45,156	44,995	23,214
June, 1923	48	24,570	50,964	48,569	26,965
Paperboard—total (Straw, Fibre, Leather, Chip, Box, etc.):					
October, 1923	112	29,097	113,624	110,829	31,892
September, 1923	113	29,506	96,477	96,669	29,314
August, 1923	114	26,396	117,932	116,551	27,777
July, 1923	115	27,931	96,362	97,114	27,179
June, 1923	101	23,560	105,218	104,052	24,726
Wrapping (Kraft, Manila, Fibre, etc.):					
October, 1923	87	46,238	52,458	52,769	45,927
September, 1923	91	47,291	49,678	48,473	48,496
August, 1923	89	43,598	50,563	47,348	46,813
July, 1923	87	38,647	47,796	43,038	43,405
June, 1923	83	35,533	54,966	50,951	39,548
Bag (All Kinds):					
October, 1923	30	6,464	9,609	9,905	6,168
September, 1923	29	6,354	6,230	6,938	5,646
August, 1923	28	6,400	8,720	8,306	6,814
July, 1923	28	6,280	5,210	5,907	5,583
June, 1923	25	5,788	9,247	8,174	6,861
Fine (Writing, Bonds, Ledgers, etc.):					
October, 1923	86	36,820	25,312	23,717	38,415
September, 1923	86	37,621	28,395	22,783	38,233
August, 1923	86	37,417	22,859	23,097	37,179
July, 1923	86	37,482	21,650	21,347	37,785
June, 1923	88	35,179	27,637	26,500	36,316
Tissue (Toilet, Crepe, Fruit Wrappers, etc.):					
October, 1923	56	8,307	11,052	11,168	8,191
September, 1923	48	8,838	9,457	9,900	8,395
August, 1923	47	9,813	9,192	9,917	9,088
July, 1923	46	9,520	8,366	8,403	9,483
June, 1923	44	8,080	10,328	9,217	9,191
Hanging (No. 2 Blank, Oatmeal, Tile, etc.):					
October, 1923	10	4,749	6,745	7,309	4,285
September, 1923	10	4,236	5,513	5,000	4,749
August, 1923	10	3,266	5,284	4,314	4,236
July, 1923	10	2,713	5,370	4,623	3,460
June, 1923	9	926	4,158	3,617	1,467
Felts and Building (Roofing, Sheathing, etc.):					
October, 1923	16	3,398	13,142	13,541	2,999
September, 1923	16	4,054	12,073	12,053	3,674
August, 1923	16	2,550	11,320	11,452	2,418
July, 1923	16	2,255	13,361	13,168	2,448
June, 1923	15	2,170	9,707	9,508	2,369
Other Grades (Specialties not other specified):					
October, 1923	61	15,163	16,012	15,679	15,496
September, 1923	65	15,896	14,469	14,743	15,622
August, 1923	65	16,319	15,288	14,429	17,178
July, 1923	64	13,134	14,572	12,993	14,713
June, 1923	60	11,351	17,439	16,793	11,996
Total—All Grades:					
October, 1923	..	195,894	422,507	421,059	197,342
September, 1923	..	203,409	378,706	377,652	204,463
August, 1923	..	190,937	433,506	423,295	201,148
July, 1923	..	180,806	383,611	375,910	188,507
June, 1923	..	165,290	423,356	409,693	178,953

COMPARATIVE REPORT OF OPERATIONS IN IDENTICAL MILLS FOR THE MONTHS OF OCTOBER AND SEPTEMBER, 1923

Grades	Number of mills	Stocks on hand first of month Net tons	Production Net tons	Shipments Net tons	Stocks on hand end of month Net tons
News Print:					
October, 1923	59	24,536	117,846	120,691	21,691
September, 1923	59	24,586	110,006	110,041	24,551
Book:					
October, 1923	62	20,689	52,018	50,881	21,826
September, 1923	62	21,004	46,430	45,618	21,816
Paperboard:					
October, 1923	95	23,422	106,970	104,603	25,789
September, 1923	95	24,105	92,091	92,514	23,682
Wrapping:					
October, 1923	86	46,238	51,918	52,229	45,927
September, 1923	86	45,003	47,454	46,229	46,228
Bag:					
October, 1923	28	5,687	8,089	8,380	5,396
September, 1923	28	6,354	6,050	6,758	5,646
Fine:					
October, 1923	86	36,820	25,312	23,717	38,415
September, 1923	86	37,621	23,395	22,783	38,233
Tissue:					
October, 1923	49	8,307	10,847	10,963	8,191
September, 1923	49	8,838	9,457	9,900	8,395
Hanging:					
October, 1923	10	4,749	6,745	7,209	4,285
September, 1923	10	4,236	5,513	5,000	4,749
Felts and Building:					
October, 1923	13	2,530	12,443	12,888	2,085
September, 1923	13	3,210	10,009	10,428	2,791
Other Grades:					
October, 1923	58	12,599	15,142	14,825	12,916
September, 1923	58	12,550	12,634	12,738	12,446
Total—All Grades:					
October, 1923	..	185,577	407,330	406,386	186,521
September, 1923	..	187,507	363,039	362,009	188,537

PERCENTAGE CHANGES IN PRODUCTION AND SHIPMENTS OF IDENTICAL MILLS IN OCTOBER, 1923, AS COMPARED WITH SEPTEMBR, 1923

	Production	Shipments
News print	Plus 7%	Plus 10%
Book	" 12%	" 12%
Paperboard	" 16%	" 13%
Wrapping	" 10%	" 13%
Bag	" 35%	" 24%
Fine	" 8%	" 4%
Tissue	" 15%	" 10%
Hanging	" 22%	" 44%
Felts and building	" 24%	" 24%
Other grades	" 20%	" 17%
Total—All Grades	" 12%	" 12%

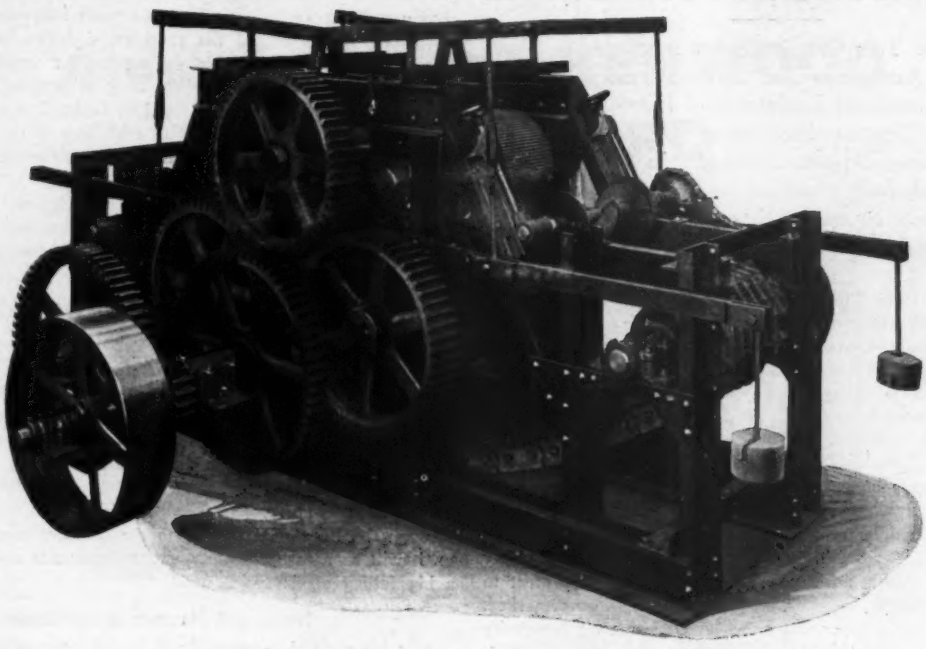
The American Paper and Pulp Association in co-operation with the U. S. Pulp Producers' Association submit herewith statistics on pulp production, consumption and stocks for the month of October, 1923, and previous months.

Pulp Production

The statistical table following gives the number of mills reporting stocks as of the first of the month and end of the month, production during month, amounts used by mills producing same with amounts shipped to concerns other than those producing same.

Grade	Number of mills	On hand first of month Net tons	Production for month Net tons	Used during month Net tons	Shipped during month Net tons	On hand end of month Net tons
Ground Wood Pulp:						
October	106	63,288	74,091	87,428	5,243	44,708
September, 1923	103	79,633	60,777	71,893	4,677	63,840
August, 1923	106	103,297	66,919	85,708	7,145	77,363
July, 1923	113	116,277	80,721	87,589	4,211	105,193
June, 1923	102	85,810	100,760	85,103	4,759	96,708

(*Continued on page* 51)



A Bark Press With Distinct Advantages Which Are Demonstrated Daily in Actual Operation

THE press pictured here has proved its soundness of design and practicability of principle through a great many installations, and over a period of years. Mill records entitle us to cite figures which offer overwhelming proof of efficiency in this type of bark press. Instead, we prefer prospective buyers of such equipment to view our press in any American or Canadian mill where one is on duty. Ask us for some interesting information about bark presses of our building; where they are, and what they are doing in effecting economies; why they leave bark with the lowest moisture content; and how the design has held down to the minimum their power requirement—and depreciation!

FIBRE MAKING PROCESSES, *Inc.*, Tower Building, Chicago

URGES PROTECTIVE TARIFF FOR CANADIAN PAPER MEN

H. F. E. Kent Tells Ontario Division of Canadian Manufacturers' Association That Canada Cannot Continue to Permit Unrestricted Exploitation of Pulpwood Resources —Former Clergyman Sues Pulpwood Exporter for Salary —S. Swanson Appointed Delegate to Hearing Before Royal Pulpwood Commission—Lumber Camps Overcome Labor Shortage—Notes and Personals of the Paper Industry.

[FROM OUR REGULAR CORRESPONDENT.]

TORONTO, Ontario, December 3, 1923.—One of the specialized industries of Canada which requires a higher protective tariff if it is to develop in the interests of Canada instead of the interests of the United States, is the pulp and paper business, according to the message delivered before the Ontario Division of the Canadian Manufacturers' Association at the King Edward Hotel, by H. F. E. Kent, of Toronto, president of the Canadian Pulp and Paper Association. Mr. Kent pointed out that while the paper manufacturers have a protection ranging from 10 to 25 per cent ad valorem, according to classification, with some few items on the free list, the protection is by no means high enough to give them a monopoly of the domestic market, nor to lend very much encouragement to the development of the industry. "In fact," Mr. Kent remarked, "except for news print paper and pulp—which owe their prosperity wholly to their favorable position in relation to the American market—the industry cannot be said to be in a prosperous condition. Competition in book and fine papers is exceedingly keen, while in the manufacture of wrapping and kraft papers the industry is overdeveloped and can hardly hope for improvement until there is an increased domestic demand and a broader foreign market.

"Certainly, the Canadian Government, if it is going to permit the continued unrestricted exploitation of Canada's pulpwood resources for the benefit of the American paper manufacturers, ought to require as a 'quid pro quo' the opening of the American market to the free entry of all finished commodities derived from pulpwood. Such a solution of the difficulty would be of advantage to Canada, even though it would be without effect as a measure of forest conservation."

Former Clergyman Sues

An interesting action was heard recently in the Supreme Court at London, Ont., when Edward Hawkins, of London, brought suit against Charles W. Cox, pulpwood exporter of Port Arthur, for the sum of $1,005. The plaintiff, who said in the box that he has been a clergyman, a broker and a real estate agent, declared that he had also been the agent of Mr. Cox. He claims the money for services rendered Mr. Cox in interviewing members of the Ontario Legislature at Toronto in the days of the Drury Government in an effort to prevent certain timber lands being acquired by a large corporation, Mr. Cox being under the impression that if the company secured the timber rights his own smaller business would suffer. Mr Hawkins said he had asked many members of the Legislature to use their influence with Hon. Beniah Bowman, Minister of Lands and Forests, to have the lands put up at auction in preference to permitting the Fort William Pulp and Paper Company to acquire them without a tender. The plaintiff gave the names of several members with whom he had interviews. His claim for $1,005 was made up of five weeks' salary at $150 a week and $255 for expenses.

Talk Over Pulpwood Conditions

At a recent meeting of those interested in pulpwood which was held in Dryden, Ont., S. Swanson was appointed a delegate from the district to appear before the Royal Pulpwood Commission when it sits in Northern Ontario after the Christmas holidays. A resolution was carried to the effect that those interested in the sale of pulpwood would regard the proposed embargo as detrimental to their interests by restricting the market for wood. At the same time they recognized that if the duty at present imposed by the United States on kraft paper could be reduced or entirely removed, the resulting benefit to Canadian mills would go far to improve the lot of the settlers by providing a home market for their pulpwood and other products.

H. F. Bullard, general manager of the Dryden Paper Company assured those present that so far as his company was concerned, there was no desire to interfere with their freedom to deal wherever their interests dictated.

Shortage of Help Is Overcome

It is now learned that the pulpwood and lumber camps in Northern Ontario are sufficiently supplied with men. For a long time this fall there was a great shortage of labor but, according to the statements of Ontario Government employment bureaus, the need for bush help has now been satisfied. Accordingly the unemployed, who have been holding back from the woods saying they would only take that work as a last resource, have waited too long. During the past few weeks upwards of 1,600 men have been sent from Toronto through the Provincial Bureau to the northern camps. From now on it will be a case of calling for replacements only. This means a big falling off in the demand.

Notes and Jottings of the Trade

S. Samuel, of Toronto, has joined the sales staff of the Lennox Paper Mills, Limited, Camden East, Ont. Mr. Samuel, who is well known in the trade, was for twenty years with the Lincoln Paper Mills, of Merritton, Ont., and latterly a member of the Samuel McDermott Paper Co., Toronto. He will look after Toronto, Hamilton and Western Ontario.

Circulars have been sent out to the printing trade by the Canadian Paper Trade Association notifying the printers of a change in the terms on paper sales. The old terms were 2 per cent 30 days, net 60 days and under the new arrangement, beginning January 1 next the terms will be net 30 days from the first of the month following shipment and a discount of 2 per cent will be allowed only if paid not later than the 20th of the following month.

At the annual meeting of the Board of Trade of Iroquois Falls, Ont., R. A. McInnis, mill manager of the Abitibi Power & Paper Co. was elected honorary president for the coming year. Mr. McInnis has always taken an active interest in the development of the north.

The International Fibreboard Co., whose plant at Penetanguishene was completely destroyed by fire a few months ago, is now making arrangements for the resumption of activities in Midland. The company is at present engaged in the re-arranging of its plant and will commence manufacturing about the first week in January.

J. A. Willoughby, of Georgetown, Ont., who is president of the Georgetown Coated Paper Mills, and is an enthusiastic exponent of golf, having placed his splendid private grounds at the disposal of the golf players of Georgetown, was recently presented by the citizens with a purse of gold at a banquet held in that town.

Fred W. Halls, of the Fred W. Halls Paper Co., Toronto, has returned from a hunting trip on the Algoma Central Railway, west of Sudbury. He succeeded in killing a moose and a wildcat.

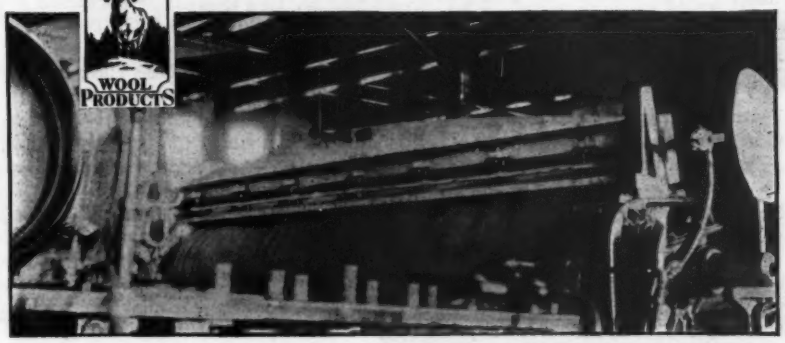
D. A. Smith Visits Dr. Baker

D. A. Smith, of the District of Columbia Paper Manufacturing Company, Washington, visited Dr. Hugh P. Baker, executive secretary of the American Paper and Pulp Association last week, to discuss government specifications for paper.

Announcing the KENWOOD GUARD BOARD

KENWOOD WOOL PRODUCTS

Unretouched photograph—1¼ minutes' exposure with machine at 720 feet per minute.



A Guard Board built on a NEW Principle.

A Guard Board that AUTOMATICALLY maintains uniform contact with the Jacket throughout the run.

A Guard Board that insures INCREASED PRODUCTION and LOWER COST through

Smoother and more uniform running of sheet; elimination of many causes of broke; lengthening the life of the wires, and decreasing amount of power required to drive the couch.

A Guard Board that, in our experience, has in general INCREASED the life of the Jacket by at least 50 PER CENT.

Send for detailed information and prices

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KENWOOD MILLS
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Arnprior, Ontario, Canada

COMBINATION OPERATING AND LOAD REGULATING VALVE FOR PULP GRINDERS

It is a fact, well established by numerous tests, and years of practical application, under various operating conditions, that load regulation on pulp grinders gives a maximum efficiency in operating grinders, making it possible to increase production from ten to twenty-five per cent without any additional cost in horse power, and at the same time maintain a uniform quality of pulp.

This increase in production leads directly to three desirable results; a lower cost in horse power per ton, a lower labor cost per ton, and increased production.

The actual saving in dollars and cents will, in a short time, pay for the cost of equipping pulp grinders with load regulators.

New Nekoosa Grinder Valve

The Nekoosa Motor and Machine Company of Nekoosa, Wis., is introducing a new combination, operating and load regulating valve for pulp grinders which offers an even greater economy along this line.

These valves take the place of the ordinary valve on each cylinder. Their simple construction (without complicated wearing parts

NEKOOSA COMBINATION OPERATING AND LOAD REGULATING VALVE FOR PULP GRINDERS

that call for high cost up-keep and constant adjustments) together with their ease in operating, makes them a very desirable equipment on any grinder.

The Nekoosa Load Regulating Valve consists of a combination of the ordinary grinder valve and an auxiliary valve through which a high pressure operates to control the load when pockets are being filled.

On a three pocket grinder carrying a grinder pressure of sixty pounds, the friction load applied to the stone would be one hundred and eighty pounds, with all three pockets in operation. When one feed is reversed, in order to refill the pocket, the friction load on the stone is reduced sixty pounds, allowing only a friction load of one hundred and twenty pounds. In order to maintain a friction load of one hundred and eighty pounds on the two remaining cylinders in operation, the pressure on each cylinder should be raised from sixty to ninety pounds. This is what is accomplished through the operation of the auxiliary valve.

High Pressure Valve

On a three pocket grinder carrying a grinding pressure of sixty pounds, the high pressure entering on the high pressure valve and the auxiliary valve are so constructed that the instant that the main valve lever is moved to reverse the cylinder, the auxiliary valve is opened, allowing the ninety pounds pressure to pass through the valve and enter the main grinding feed line. Instantly the pressure on the two remaining cylinders in operation, is raised from 60 to 90 pounds, thus maintaining a constant friction load of one hundred and eighty pounds while one cylinder is out of operation, and the pocket is being refilled.

When the pocket has been filled, the main lever is moved to an operating position. The instant the pressure foot begins to press upon the wood, in that pocket the lever on the auxiliary valve is closed, and the pressure in the main grinding line drops from ninety pounds to sixty, but the total friction load still remains one hundred and eighty pounds.

The two levers operating the main valve and the auxiliary valve are so placed that when the main valve lever is moved to reverse a cylinder, the lever to the auxiliary valve is also moved and causes the parts in the auxiliary valve to open. This construction also makes it possible to delay the closing of the auxiliary valve until the load has been applied to the stone on the third pocket.

In actual operation, these valves hold the maximum grinding load so uniformly during the changing of the pockets that the normal speed of the stone is not affected at all, although there will be slight variations in the speed, due to pinching and binding of the pocket. However, ordinary pinching and binding of the pockets are forced out through the action of the high pressure whenever a pocket is being recharged.

Valves Operate Easily

These valves, when properly packed, operate just as easily as any valve on the market, and are no more difficult to control than the ordinary valve. Without moving the position of the body, three movements of the hand complete the operation. One pull on the main lever reverses the cylinder and opens the pressure line, the second motion, after the pocket is being filled, puts the cylinder in operation, and the third motion closes the high pressure line.

These valves in actual operation are increasing production from 10 to 20 per cent.

On McCormick Board of Directors

[FROM OUR REGULAR CORRESPONDENT]

WATERTOWN, N. Y., December 3, 1923.—Carl B. Martin, assistant treasurer of the Hanna Paper Corporation and secretary and assistant treasurer of the St. Regis Paper Company, and C. T. Jewell, assistant general manager of the St. Regis Paper Company, are on the board of directors of the Thomas J. McCormick Paper Corporation of Albany, which has just filed incorporation papers with the Secretary of State. The announced purpose of the concern is the manufacture of stationary and school supplies.

Asked concerning the corporation Friday Mr. Martin said that Mr. McCormick had been acting as selling agent for the products of the Ontario Specialties Corporation which has been handling news and manila papers manufactured by the St. Regis and Hanna companies, and that this is simply the formation of a corporation to continue that business.

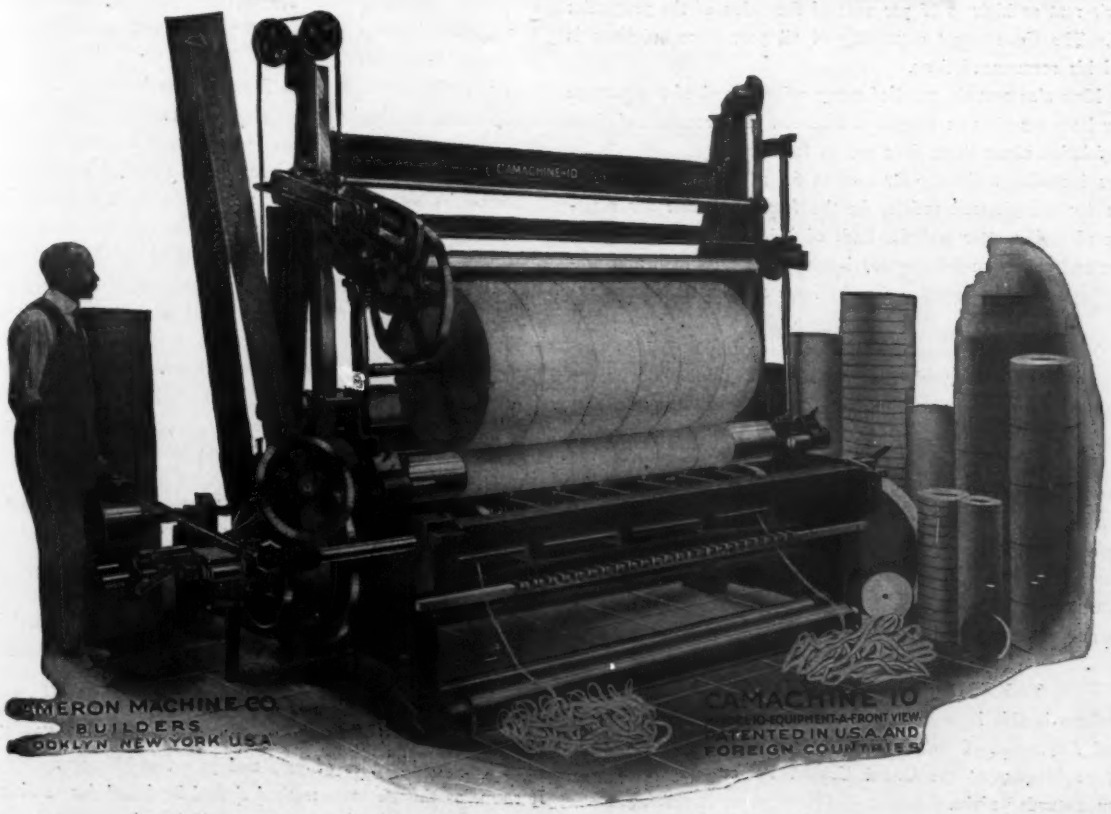
TRADE CAMACHINE MARK

CAMACHINE 10 MODEL 10

A CAMERON SLITTING AND ROLL-WINDING MACHINE FOR UNIVERSAL SERVICE IN

PAPER MILL FINISHING ROOMS
PAPER CONVERTING PLANTS
WHOLESALE PAPER WAREHOUSES
PAPER GOODS FACTORIES

Built in widths 42"-52"-62"-72"-82" x 36". Maximum Diameter for Small to Medium Large Standard and Specialty Rolls of Paper and Board.



Editorial

Vol. LXXVII New York, December 6, 1923 No. 23

HENRY J. BERGER, Editor

GROWTH OF POSTAL SERVICE

Nothing in the way of government service touches the average person so intimately as does the postal service and, for that reason, there is much of very general interest in the annual report just made by Postmaster General New.

Going into figures, Mr. New calls attention to the fact that since 1913, when the parcel post system was inaugurated, the postal revenues have increased approximately 100 per cent while, in the past 16 years, the weight of the mails has increased more than 500 per cent.

This serves to show to what extent business has learned to lean on the postal service and to indicate the tremendous mail order business which has been built up within a comparatively short space of time.

The revenues for the year amounted to $532,827,925 compared with $484,853,540 in 1922. Economies of the year resulted in a reduction in the postal deficit amounting to approximately $30,000,000.

Mr. New passes criticism on the government's unbusiness-like methods of securing post office quarters under the leasing system. He declares that, in many instances, the government is paying for a year's rent as high as 17 per cent of the value of the properties leased. The Government ownership of all post office buildings is one of his recommendations.

Mr. New also sees the need of many reforms and of the passage of new laws touching on the postal business. His recommendations for legislation along these lines are as follows:

Laws including authority for him to fix a charge for a return receipt for a registered article, fix the fees chargeable for registration of mail matter and the limit of indemnity, extend the insurance and collect-on-delivery services to third-class mail and prescribe the fees to be collected for the issue of domestic money orders.

Mr. New also recommended that legislation be enacted to provide for the appointment of postmasters of the third class by the Postmaster General, pay rent on post office premises monthly instead of quarterly, compensate employees for overtime services in excess of eight hours daily, establish motor vehicle rural routes of not less than 36 nor more than 75 miles in length, increase the interest rate on postal savings deposits to 3 per cent and for other improvements and amend existing laws in regard to examination and renewal of official bonds, age retirement of certain employees, leave of absence of railway postal clerks and moving expenses of officers and railway postal clerks.

TAKE IN THE POWER SHOW

Elsewhere in this issue will be found an account of the Second National Exposition of Power and Mechanical Engineering which opened on Monday at the Grand Central Palace and which will close on Saturday night.

No published account, however, can adequately describe the many features of the show, the wholesale features, the general completeness, the many innovations and the revelations of scientific ingenuity.

The show is a great success—that is freely admitted by all who have attended. If you have not yet attended, the PAPER TRADE JOURNAL advises you not to lose the opportunity which will expire on Saturday night. If you are the least bit interested in such matters you will find that a visit to the show will reward you abundantly.

NORWEGIAN LABOR TROUBLES AGAIN

Cablegrams from Norway received just as the PAPER TRADE JOURNAL was going to press indicate that the lockout there has been averted. Those who depend on Scandinavian pulp and paper in this country will be glad to know that the most recent dispute has proved to be a false alarm.

Reports last week that the lockout had actually gone into effect were erroneous. It appears that the difficulty was settled just before it began and after the news dispatches had been sent to America.

Although details of the new agreement are not at hand one is led to speculate just how permanent it will be. The workers and the owners have shown little disposition to agree in recent years. It seems unfortunate that so much production has been lost from time to time because of this fact.

The manufacturers lose as much money as though they had burned up their products. The workers may raise their wage scale a trifle, but it takes months and years for them to make up the total they have lost.

It is to be hoped that the Scandinavian industry, both workers and owners, are beginning to see the futility of quarrelling. The trade in this country is getting a little bored with receiving reports of lockouts and strikes with consequent curtailed production.

Difficulties between employers and employees in Scandinavia seem to be interminable. News of them has now become so monotonous that it calls to mind the ancient legend of the king who offered his daughter's hand to the man who could tell the longest story.

The winner related one about a cloud of locust's that descended on a huge granary. There was only one opening in the place and that was large enough to admit only one locust.

"Then another locust went in and brought out another grain of corn, then another locust went in and brought out another grain of corn—" the story ran, until at the end of several months the king handed over his daughter to get rid of the fellow.

For some time the domestic market has been thrown out of kilter by strikes and lockouts in Scandinavia. There is no doubt that the mill owners and their workers are sadly at odds over something and it appears that little is to be gained by such prolonged wars. About the only thing the victor will have in the end is the victory for there are other countries that are watching their chance to snap up the Scandinavian business in this country.

The PAPER TRADE JOURNAL is not vitally interested in the merits of the case except as it influences the home markets. Scandinavia turns out good grades of pulp and paper which are needed here. It seems as though some method should be found for settling once and for all the bickering that goes on in its mills.

New York Trade Jottings

Frank Dunaway is now associated with the Woodpulp Trading Company, 501 Fifth avenue.

* * *

The directors of the International Paper Company have elected Owen Shepherd a member of the board. Mr. Shepherd is treasurer of the company.

* * *

Johaneson, Wales and Sparre, Inc., of 16 East 41st street, announce to the trade that their telephone numbers have been changed to Vanderbilt 1396-7-8-9.

* * *

Henry W. Stokes, president of the American Paper and Pulp Association, visited the organization's offices at 18 East Forty-first street, to discuss the current business.

* * *

William H. Donaldson, Jr., formerly associated with his father in the firm of Howell Donaldson, Inc., has just joined Bermingham & Prosser and will travel in the Kalamazoo district.

* * *

E. G. Ballis who for some time has been Eastern sales manager for the Peerless Paper Company of Dayton, Ohio, has resigned his position, the resignation becoming effective December 1.

* * *

A meeting of the Committee for the Perpetuation of the Paper Industry in the United States, which is made up of the leading members of the industry, was held at the Union League Club on Tuesday.

* * *

Axel Wallenberg, Swedish minister to the United States, was in this city during the week. Among other places, he called at the offices of the American Paper and Pulp Association, 18 East Forty-first street.

* * *

G. P. Genburg, a Swedish student, has been sent to the United States to study paper under the auspices of the Scandinavian American Foundation, which exchanges scholarships with American students who study in Sweden.

* * *

J. W. Coker, of the Carolina Fibre Company, Hartsville, S. C.; and D. A. Crocker, of Eastern Manufacturing Company, Bangor, Me., were among the out of town members of the industry who spent a few days in this city last week.

* * *

The District of Columbia Paper Manufacturing Company has established an office at 320 Broadway, Room 1321, with R. K. Baker in charge. This is to give the company's customers the best possible service in obtaining the various items in its representative list of blotting papers.

* * *

Friends in the trade are congratulating members of the firm of Ira L. Beebe, paper stock dealers, on the arrival of a son to Roderick Beebe. The event makes Ira L. Beebe a great grandfather and Ira L. Beebe, Jr., a grandfather. All three are active in the industry throughout the country.

* * *

H. B. Shepard, of 832 Park Square Building, Boston, Mass., was a visitor in town during the week. He left his position with the Eastern Manufacturing Company, where he had been for nine years last September, and has now gone into business for himself as a forest engineer with special knowledge of the problems of the paper industry.

* * *

C. A. Wadsworth who for several years has been associated with his brother H. B. Wadsworth, devoting his attention to handling the domestic business of H. B. Wadsworth, Inc., has resigned to open his own office for the handling of paper, pulp and mill supplies. He is located at 342 Madison avenue, Room 906. His telephone number is Vanderbilt 4835.

* * *

That the trend of interest in the Pacific Coast timber is extended in the paper industry is shown by a letter received by Dr. Hugh P. Baker, Executive Secretary of the American Paper and Pulp Association from the College of Business Administration at the University of Washington, which states that many requests for information concerning pulpwood and the paper industry in the Pacific Coast were being received by that College. The inquiries touch such subjects as news print production in states such as Washington, Oregon and Idaho; production of different classes of paper such as wrapping, book, cover, boards, etc.; and consumption of news and other papers.

Norway Paper Lockout Averted

The threatened lockout of 15,000 or more pulp and paper mill workers in Norway has been averted. This is the information received by the American Paper and Pulp Association which has been keeping informed of conditions through cablegrams. Reports that the lockout had gone into effect were erroneous, and an agreement has been reached between the workers and the employers. A cablegram stating that the lockout, several times postponed, had finally gone into effect was followed by another message stating that the lockout had been averted at the last moment by an agreement which will prevent labor difficulties for many months ahead.

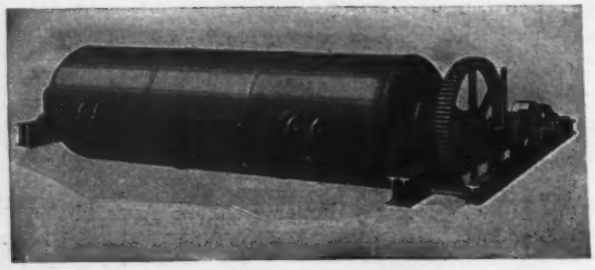
PAPER PRODUCTION DATA

(*Continued from page* 44)

Sulphite, News Grade:						
October, 1923.....	42	16,730	52,907	47,204	5,194	17,239
September, 1923....	39	15,800	37,573	35,226	3,336	14,811
August, 1923.....	42	21,091	47,482	45,059	5,578	17,936
July, 1923.....	38	15,505	37,224	36,100	2,817	13,812
June, 1923.....	39	13,780	44,098	44,684	2,216	10,978
Sulphite, Bleached:						
October, 1923.....	20	4,725	20,515	16,667	5,033	3,540
September, 1923....	20	5,529	16,845	13,891	3,743	4,740
August, 1923.....	20	5,294	19,179	14,829	4,140	5,504
July, 1923.....	16	1,211	11,407	8,864	2,389	1,365
June, 1923.....	13	2,573	13,497	11,372	1,674	3,024
Sulphite, Easy Bleaching:						
October, 1923.....	9	1,071	7,771	6,530	776	1,526
September, 1923....	7	853	6,532	5,572	933	880
August, 1923.....	9	1,183	7,057	6,501	695	1,044
July, 1923.....	8	1,699	5,458	5,078	501	1,578
June, 1923.....	5	1,070	4,100	4,132	145	893
Sulphite, Mitscherlich:						
October, 1923.....	6	2,347	6,005	5,020	951	2,381
September, 1922....	6	2,494	5,030	4,376	782	2,366
August, 1923.....	5	1,143	4,915	3,421	863	1,774
July, 1923.....	6	1,875	5,462	4,202	1,179	1,956
July, 1923.....	6	1,156	5,857	4,572	840	1,601
Sulphate Pulp:						
October, 1923.....	12	13,051	12,711	10,398	4,596	10,768
September, 1923....	12	7,055	10,739	9,039	1,915	6,840
August, 1923.....	14	8,266	14,527	10,239	1,877	10,677
July, 1923.....	13	4,365	13,150	9,472	3,576	4,467
June, 1923.....	14	5,925	17,662	11,126	4,203	8,258
Soda Pulp:						
October, 1923.....	12	4,695	12,497	8,460	4,935	3,797
September, 1923....	12	5,816	12,309	7,789	5,643	4,693
August, 1923.....	11	1,317	11,946	8,140	3,399	1,724
July, 1923.....	11	5,761	8,588	3,890	4,678	5,781
June, 1923.....	9	6,567	7,291	3,998	4,110	5,750
Other than Wood Pulp:						
October, 1923.....	3	239	143	117	137	128
September, 1923....	3	178	194	...	133	239
August, 1923.....	3	152	270	107	135	180
July, 1923.....	3	70	236	...	156	150
June, 1923.....	3	183	217	168	162	70
Total—All Grades:						
October, 1923.....	..	106,146	186,640	181,824	26,865	84,097
September, 1923....	..	117,358	149,999	147,786	21,162	98,409
August, 1923.....	..	141,743	172,295	174,004	23,832	116,202
July, 1923.....	..	146,763	162,246	155,195	19,507	134,307
June, 1923.....	..	117,064	193,482	165,155	18,109	127,282

Where Paper is Made—You'll Find BIGGS ROTARIES!

The Biggs Boiler Works Co. Akron Ohio



Go where you will among paper plants—no matter what kind of material is used or what kind of stock is produced—you're sure to find Biggs Rotaries and Biggs *boosters!*

Ask the man who is using a Biggs Rotary Bleaching Boiler what *he* thinks of the type of service he is getting. Get his slant on the ability of Biggs Rotaries to *deliver the goods,* in a steady, dependable manner. Then send for our new Rotary Boiler Book and see how we make rotaries, step by step, to insure long, untroubled service.

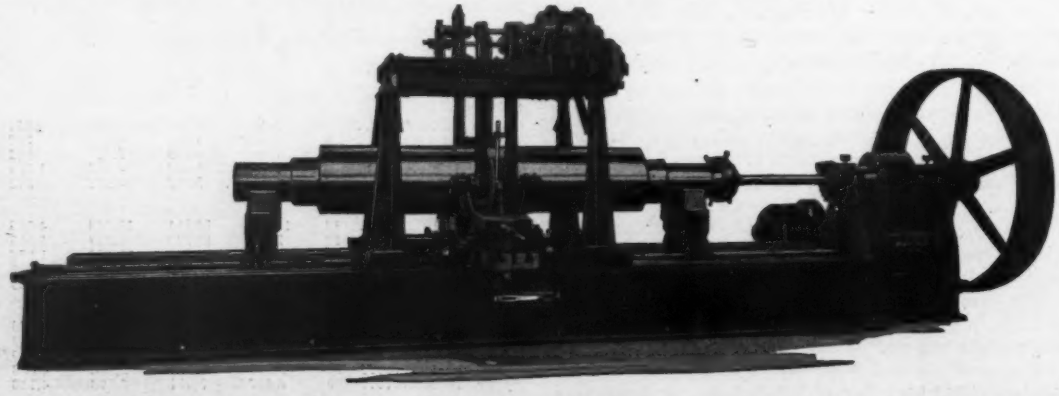
Between the two you will be able to arrive at some very definite conclusions regarding the operation and construction of Biggs Rotary Bleaching Boilers. And naturally you will think of Biggs when you are considering your next installation.

Globe and Cylinder Rotary Bleaching Boilers
Digesters
Riveted Steel Tanks
Flumes, Smokestacks, Penstocks,
General Steel Plate Construction of every description.

The Biggs Boiler Works Company
AKRON 20, OHIO

LOBDELL

ROLL GRINDERS are the only machines of the kind fitted with automatic crowning device which develops a perfect crown without the use of a guide or former and repeated trying for the correct setting.



LOBDELL Calenders are equipped with Patent Electric Motor, Hydraulic or Ratchet Lift all operated from the floor.

LOBDELL Micrometer Calipers are handy and accurate.

LOBDELL CAR WHEEL CO. Est. 1836 **Wilmington, Del. U. S. A.**

Section of the

Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G. MacNAUGHTON, Secretary

CONTINUOUS CAUSTICIZING IN SODA AND SULPHATE PULP MILLS*

More than one attempt has been made to improve upon the old methods of preparing caustic liquor used in the production of soda and sulphate pulp. It is doubtful if the various systems hitherto introduced in the effort to bring about these improvements have effectually accomplished the desired results since in most of the mills today the same apparatus and the same methods of operation are in use that were accepted as standard twenty and thirty years ago.

The apparent lack of enthusiasm with respect to new methods cannot be attributed to an assumption that there is no room for improvement. One has only to contemplate the average soda room,

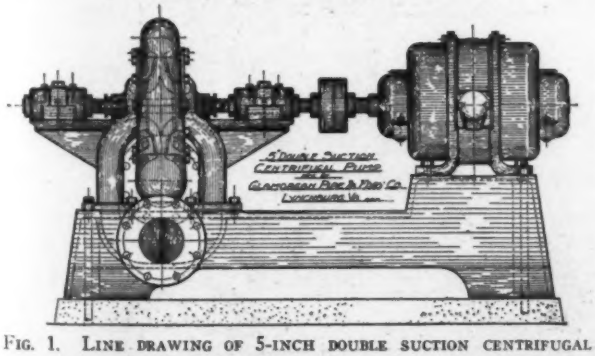


FIG. 1. LINE DRAWING OF 5-INCH DOUBLE SUCTION CENTRIFUGAL PUMP, DIRECT DRIVE. THE SCROLL OF THIS PUMP CAN BE SET FOR RIGHT OR LEFT HORIZONTAL AND ALSO VERTICAL DISCHARGE

with its network of piping, its oftentimes worn apparatus which is frequently found to be struggling along under a load far in excess of its rated capacity, the high labor costs, the large alkali losses, the many leaks, the consumption of live steam, and the large amount of floor space devoted to this department, all of which makes for costly operation, to realize there is a crying need for improvement.

The inefficiency of present methods of washing to recover the alkali in the caustic sludges is illustrated by the percentage of loss which runs from 3 to 5 per cent of the amount of alkali charged even in the best managed mills. It is often higher. Another indication is the free lime content of the discarded sludges. We have a record of one mill where the free lime in the discarded sludge was at times as high as 19 per cent and the average over a considerable period of 13 per cent.

It is only fair to state that not every instance of waste in the soda room is the fault of the mill superintendent or his operatives. They frequently have to do the best they can in the face of many difficulties. On the other hand, we find mills where the blame rests entirely upon the operatives. This was the case in a certain mill where the records showed that on one shift it was quite the regular thing not to boil the batches. The temperature averaged from 190° to 194° F. Again, there are cases where carelessness and ignorance are combined with faulty design, the inevitable result being costly and inefficient operation.

Improvements Hitherto Suggested Have Not Been Generally Successful

Although the need for something better has long been apparent mill superintendents have been somewhat skeptical with respect to the cureall for their troubles which are offered from time to time. Coupled with the inherent disinclination characteristic of most industries to depart from methods that have become more or less standardized, and therefore known to be safe within their limitations, is the knowledge that some of the suggested improvements are theoretically sound, but practically dangerous, or at least so complicated as to offer nothing more than added responsibility. For example, not all of the rotary filters which are sold for sludge filtration prove to be the desired panacea; they may be all right for

FIG. 2. TWO 6′ x 3′ OPEN DRUM ROTARY FILTERS

certain purposes, but it does not necessarily follow that they will solve all of the problems found in causticizing plant.

Some of the so-called new methods are really not new after all, inasmuch as they start with the old method of causticizing, i. e., the

*From Bulletin No. 5, issued by Glamorgan Pipe and Foundry Co.

boiling of soda ash with lime in a tank. While these methods have helped to some extent after actual causticization has taken place, and it is not our intention to disparage the advances that have been made along these lines, the fact remains that none of the new systems which have been put forward has been successful in all particulars nor do we understand that any or all of them have met with an enthusiastic reception. In further explanation of this situation it might be suggested that many of the methods introduced as improvements have been in reality modifications of processes used in other fields for work of an entirely different nature from that which they are called upon to perform in in the causticizing room. As a result these modifications or adaptations have not been completely successful simply because that thorough knowledge of causticizing and its problems, which can only be gained through long experience and actual association with the work itself, had not been incorporated in their design.

Inasmuch as we are at this time installing a continuous system of causticization at one of the soda pulp mills in New England a description of our process may be of general interest owing to the fact that its use will bring about improvements that cannot be ignored by the industry. This process has not heretofore been used in connection with the manufacture of pulp. It should be distinctly understood, however, that it is not an untried innovation; the first continuous causticizing plant of our design has been in constant use for more than ten years. It was built for one specific purpose, the production of caustic liquor from lime and soda ash more economically and more efficiently than could be done with any of the systems in use at that time. The plant was an immediate success and has continued to give results that have been satisfactory in every respect.

The batch system which the new process supplanted, was as efficient as the majority of the batch processes in use today. The new unit now being installed in New England is similar to the original plant in all essential details. Since the capabilities of this system have been established beyond the shadow of a doubt by a long period of commercial operation under exacting conditions we believe that we are in a position to speak from a practical standpoint rather than from one of theory; moreover, all that we say can be substantiated by actual results.

Apparatus Required and its Operation

The special apparatus and plant required for our continuous process includes the causticizer, decanter, rotary filters, lime slaker, and certain auxiliary equipment such as vacuum pumps, lime and liquor pumps, and sludge agitator. If the lime is to be recovered the list also includes a rotary kiln installation.

All of this apparatus functions continuously. The causticizer is constantly supplied with calcium hydrate and sodium carbonate in the proper proportions by means of pumps. A steady discharge of caustic liquor and lime mud is delivered by pumps to the decanters whence the clear hydrate is drawn from the top and the sludge from the bottom. The latter is pumped direct to the sludge agitator from which it flows to the filter. If the installation includes a lime recovery plant the cake is delivered from the filter direct to the rotary kiln which is fired with gas, powdered coal, or oil. The product of the kiln is recovered lime which is delivered at a uniform rate to the slacker, where it is converted into milk of lime and then pumped to the causticizer together with the carbonate liquor.

This, in a few words, is a description of the cycle of operation.

Inasmuch as the filtration of the sludge is the only point of similarity between our methods and apparatus and that of others we feel constrained to explain in some detail the type of machine that we use and recommend and which our extended experience in causticizing work has demonstrated as most satisfactory and most efficient for this particular purpose.

The filter used for this highly important part of the process is our standard open drum or single compartment machine, which is made in two sizes, the larger having a drum 6 ft. in diameter with a face 3 ft. in width; the smaller has a drum 4 ft. in diameter with a face 2.5 ft. in width. The drums are covered with 100 mesh monel metal cloth which is held in place by patented stretcher rods; no wire is used for holding the cloth except at the edges.

At least twenty inches of vacuum is supplied by our standard duplex high efficiency exhauster which has a minimum displacement capacity of 18 cu. ft. per square foot of filter surface. The number of filters required depends upon the amount of sludge to be handled; our open drum machine will deliver from 1,600 to 1,800 lb. of cake per square foot of surface in 24 hr., bone dry basis. The moisture content of this cake is about 30 per cent and its thickness averages from one to two inches.

The sludge comes to the filters at a temperature of not less than 80° C. with a solid content of from 30 to 35 per cent by volume and a free lime content not in excess of 5 per cent. Water at a temperature of not less than 80° C. is used to wash the cake.

Our open drum filter has proved to be the best and most practical machine yet developed for the filtration and washing of caustic sludges. Nothing is to be gained through the use of compartment type filters for this purpose; as a matter of fact there are several reasons why they should not be used.

In the first place, it is not necessary to separate the wash water from the filtrate; both go to the decanter or to the slaker. The amount of water used for washing is extremely small in comparison to the total volume of liquor and the extra equipment

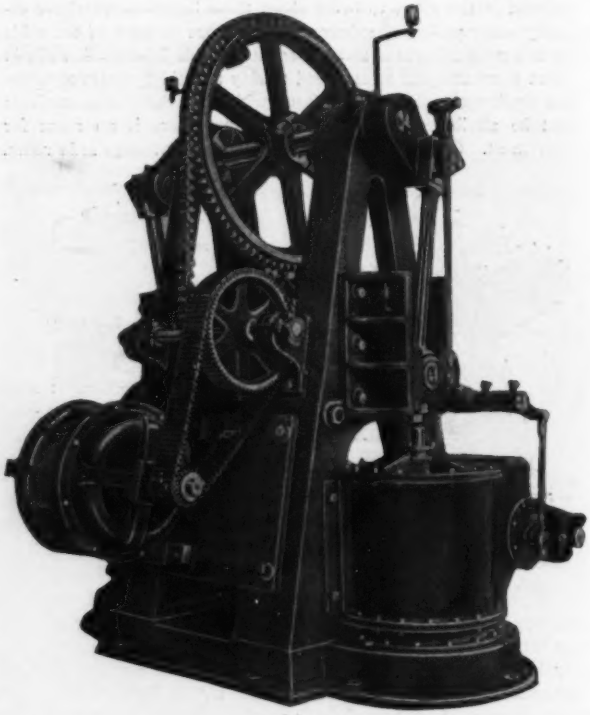


FIG. 3. HIGH EFFICIENCY EXHAUSTER. DIRECT MOTOR DRIVE THROUGH SILENT CHAINS

needed to separate it from the filtrate is, therefore, an unnecessary expense. Again, the use of the open drum filter permits a large volumetric displacement of air which is a factor of considerable importance in the efficient filtration of certain classes of materials of which caustic sludge is one.

With a correctly designed open drum filter and proper methods

of causticization it is not necessary to provide means for blowing the cake off the wheel with compressed air; it will fall off cleanly as is shown in Fig. 4.

Our machine is built for heavy service over long periods of time with few repairs and only a minimum amount of attention. There is no complicated system of piping inside the drum nor are there any valves. Piping and screwed fittings are frequent sources of trouble in filtering caustic solutions. The first of these filters has been in operation for twenty years and is still rendering splendid service day in and day out. The one shown in Fig. 4 has been in operation for ten years.

The opinions which we have expressed above concerning the use of filters are unbiased since we also manufacture a compartment type machine that is second to none. The compartment filter is invaluable for certain specific purposes, but it lacks a great deal of being equal to the open drum type for caustic sludge filtration.

If no lime recovery plant is provided the filtered sludge is discharged into the sewer or else some other disposition is made of it. Since it contains not more than one-half of one per cent.

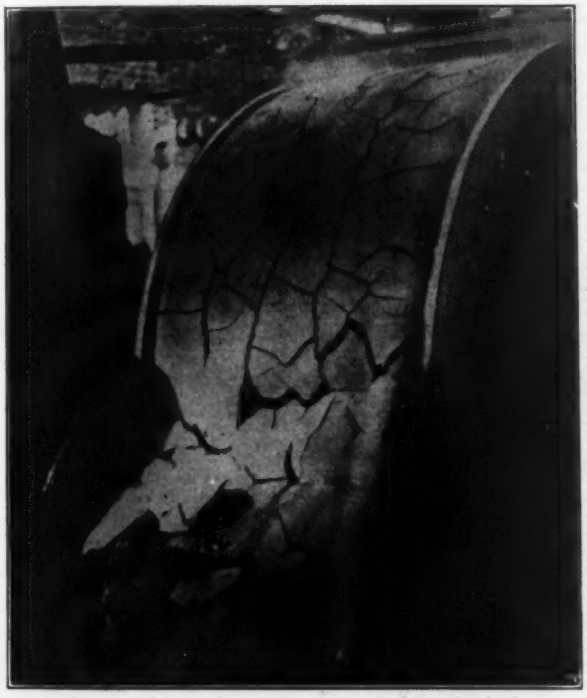


FIG. 4. UNTOUCHED PHOTOGRAPH OF THE 6′ x 3′ OPEN DRUM FILTER IN OPERATION ON LIME SLUDGE. NOTE HOW THE DRY CAKE FALLS OFF THE WHEEL

alkali, on a bone dry basis, as a result of the thorough washing given it on the filters, the total soda loss is not a large item. Such disposition of the filtered sludge involves a waste of lime, however, for as we shall show it can be recovered profitably.

Control of Operation

All of the apparatus used is easily controlled and, as it is a continuous operation, the percentage of causticity can be readily held at a more uniform test than is practicable with the batch method. Control analyses, by means of which the raw liquor and milk of lime feeds are governed, are made at frequent intervals on the discharge from the causticizer. Operation is very nearly automatic after the feed valves are once set and the entire department as a whole requires only a small amount of attention. The lime consumption is about the same as in the batch process, that is from 550 to 600 lb. of calcium oxide to 1,000 lb. of sodium carbonate.

In most of the pulp mills which have come under our observation the agitation during the causticizing operation is deficient. Proper boiling for a given period and effective agitation are absolutely essential to uniform causticization regardless of whether the batch or the continuous process is used. In either case the design of the apparatus should be such as to make possible the attainment of these two important factors and that without difficulty. It is a fact that in this particular, if in no other, the advantage lies with the continuous process since in it *efficient boiling cannot be obtained without, at the same time, securing thorough agitation, and vice versa.*

Another feature of the continuous causticizer which makes for a uniform product, is that the quantity of liquor under treatment at any time is comparatively small and, consequently, the heating is quickly done. This factor also aids agitation.

The causticizing department of a 50-ton soda pulp mill, under the conditions which prevail today, ordinarily requires about 7,500 sq. ft. of floor space. Our continuous causticizing system of the proper size to produce an equivalent amount of liquor and including a lime recovery plant, can be installed in a space 43 ft. by 137 ft. the total area being only 5,891 sq. ft. The compactness and simplicity of the plant is shown in Figs. 5 and 6. Two men per shift can handle the causticizing operation and one additional man is required for the recovery plant.

There is nothing that demands expert attention nor is there any part of the installation which can be regarded as complicated and a potential source of trouble. After the operatives have become accustomed to their new duties the mill superintendent can forget the causticizing department and seek his worries elsewhere.

In order that the advantages of our process can be more clearly understood and appreciated we shall contrast it with the well-known batch system of causticization which is generally regarded as standard in the soda and sulphate pulp mills. This comparison is supplemented with tables of operation costs, covering both processes, which are based upon actual conditions. In these tables the value of our continuous process is shown in a tangible way.

Batch System of Causticization

In the so-called batch process, as it is usually found today, the actual causticizing operation takes place in round flat-bottomed tanks which are equipped with a vertical agitator or stirrer, which at best is an inefficient means of agitation. These tanks average, as a rule, from 10 to 12 ft. in diameter and about the same in depth. Strong black ash liquor is pumped from the leach cell storage tanks to the causticizing tank and the requisite amount of make up sodium carbonate is added either dry or after it has been dissolved in a small auxiliary tank. Fresh lime is dumped into the tank to causticize the raw liquor, the proportion being 60 lb. of the former for every 100 lb. of carbonate in the latter. Occasionally the tank is equipped with a suspended basket in which the lime is placed.

The contents of the tank are then heated to the boiling point either with a steam coil or by blowing live steam directly into the liquor. A variation in this method is to bring the mixture to a boil with live steam which is admitted through an injector provided with an air inlet. When the boiling point is reached the air port in the injector is opened and air is drawn in to increase the agitation.

The average time required for filling, boiling, and agitating the tank, in making the first batch, is about two hours. The actual time during which the solution boils violently is short, varying from 10 to 30 minutes in most cases.

After the batch is as thoroughly causticized as is possible under the circumstances it is allowed to settle; the clear caustic liquor is then syphoned off down to the top of the lime mud and run to the storage tanks. Occasionally the contents of the operation pan are drawn off into another tank where the settling process takes place. In one plant that we have seen these settling pans are out of doors and unprotected from the weather.

The lime mud left in the tank normally contains about 60 to 62 per cent liquor and 38 to 40 per cent solids by weight. The usual method of handling this sludge is to make another complete batch by boiling it with what is called third liquor, that is, the liquor from the second washing of sludge in a preceding operation, of which the second batch might properly be called the first wash. The agitating and settling process is repeated and the clear liquor is syphoned off and added to the liquor drawn from the first batch. The strength of the combined liquors should average from 10.6° to 12.4° Baume with a causticity of from 92 to 94 per cent; it is then ready for the digesters. In some mills new portions of both lime and soda are added to the sludge left from the first batch to make the second. In such cases the boiling process is repeated.

Two or three additional washes are usually made with the lime sludge to get the largest possible amount of alkali out of it.

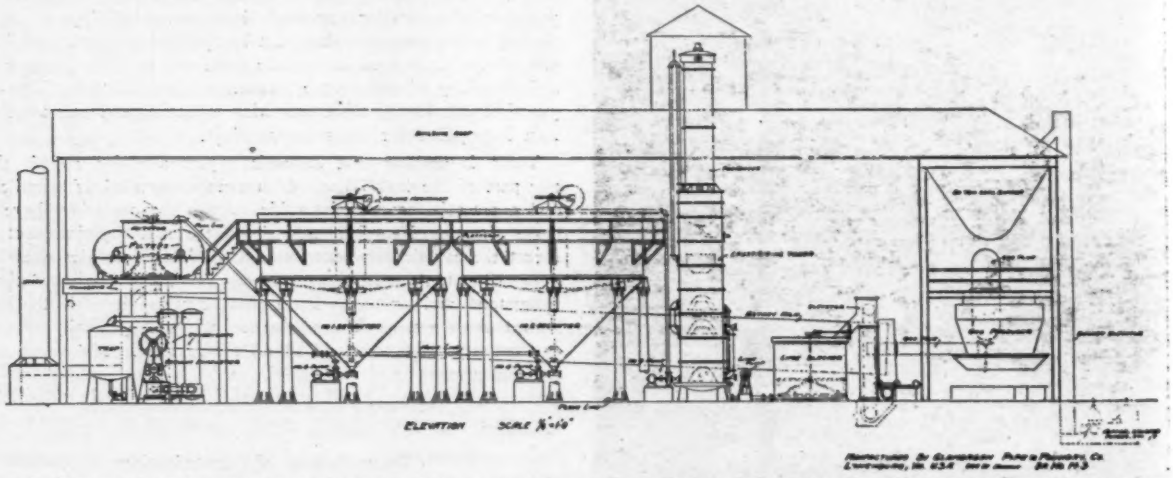


FIG. 5. ELEVATION OF CONTINUOUS CAUSTICIZING UNIT AS ARRANGED TO BE OPERATED IN CONJUNCTION WITH OUR LIME RECOVERY PLANT. NOTE SIMPLICITY OF APPARATUS AND FREEDOM FROM COMPLICATED PIPING.

In some mills the operation just described has been varied to a certain extent but, broadly speaking, the method as outlined is considered standard practice throughout the industry. At least three men per shift are required for operation.

Weaknesses of the Batch System

The methods of causticizing just described are open to a number of serious objections, mainly contingent upon the necessity of making so many washes after the strong liquor is drawn off the first batch in order to get the alkali out of the lime sludge. This duplication of effort results in a very small production of digester liquor in proportion to the amount of pan room, labor, and steam required. In order to get more production not a few operators have worked their liquor room far beyond its effective capacity by shortening the time allowed for the proper making and settling of the batches and consequently are getting inefficient operation and a resulting alkali loss of from 3 to 5 per cent, or more.

In addition to the time lost to the pan while it is being occupied by the various washes the steam and power required to heat and agitate them are important items. Again, the expense of handling and storing the large amount of weak liquor is high.

Where so many batches have to be made and so much liquor has to be handled the chances of losses occurring, due to pans boiling over and leaks in pumps and pipe lines, are correspondingly increased. The system tends to a multiplicity of pipe lines, pumps, and valves, all of which increases the cost of maintenance and operation.

These faults, together with inefficient agitation, constitute some of the inherent weaknesses in the so-called batch system of causticizing that cannot be eradicated entirely. When this method is contrasted with the continuous process these shortcomings are even more apparent.

In the first place, there is the general advantage characteristic of a continuous method of carrying on any chemical process as compared to an intermittent or batch method of conducting the same process. This advantage may be summed up in the slogan of a well-known concern, pioneer manufacturers of high grade apparatus for the continuous gasification of coal, to the effect that "continuous processes lead to continuous profits."

Specifically, there is the question of floor space; the continuous process, including a complete lime recovery plant, requires less than two-thirds that required by a batch system of equal capacity but without lime recovery. The reduction of alkali loss uniformly to less than one-half of one per cent, the reduction of steam consumed to about 25 per cent of that normally required by the batch system, a very marked reduction in the amount of piping and fittings needed, decreased cost of repairs and maintenance, the possibilities for uniform chemical control of the process, and a large elimination of the personal equation which so often leads to inefficient operation are all factors of prime importance which should have the thoughtful consideration of every manufacturer of soda and sulphate pulp.

The data which we append on the following pages are based upon our extended practical experience with both types of causticizing plants. They may be regarded as illustrative of the savings which one offers over the other. Any one who wishes to make these figures fit the special conditions at a given mill may substitute local costs for those used in the following tables. We invite an investigation of this kind and shall be glad to submit additional information upon any point that is not absolutely clear.

TABLES OF OPERATION COSTS

TABLE 1

Causticizing Plant for Mill Producing 50 Tons Soda Pulp Daily

Caustic required, approximately 50,000 pounds. Liquor equivalent 65,000 gal. at 13° B.

A—BATCH PROCESS WITHOUT LIME RECOVERY

Floor space required, 7,500 sq. ft. Estimated cost of plant, $52,000.

1.	Interest and depreciation: 16 percent on $52,000	$22.80
2.	Live steam: 39,000 lb. at 42 c. per 1,000 lb	16.38
3.	Labor: 3 men per 8 hr. shift at 40 c	28.80
4.	Power: 235 kw.-hr. at 1.95c	4.58
5.	5 Per cent alkali loss: 3,275 lb. at $36 ton	59.00*
6.	Lime: 19.575 tons at $10	195.75
7.	Repairs and supplies at 50c ton caustic	12.50
	Per diem cost of operation	$339.81

B—CONTINUOUS PROCESS WITH LIME RECOVERY

Floor space required, 5,891 sq. ft. Estimated cost of plant, $110,000.

	Operation Costs
16 Per cent on $110,000	$48.20
9,100 lb. at 42 c. per 1,000 lb	3.82†
3 men per 8 hr. shift at 40c	28.80
1,790 kw. hr. at 1.95c	34.90
¼ of 1 per cent alkali lost: 164 lb. at $36 ton	2.95
Recovered lime	73.47‡
Repairs and supplies at 50c. ton caustic	12.50
Per diem cost of operation	$204.64
Daily saving in cost of operation	135.17
Saving in one year of 300 days	40,551.00
Return on investment of $110,000	36.9%

*Alkali loss varies in different mills; 5 per cent is considered a conservative figure.

†This item can be eliminated if exhaust steam at 10 lb. pressure is available.

‡This figure represents 7.7 tons coal at $7 per ton plus 1.957 tons make-up lime at $10; other costs connected with the lime recovery department are included in Items 1, 3, 4 and 7 in B above. For itemized costs covering this operation, see Table 3, following.

Per diem cost of operation	$154.74
Cost of 19.575 tons fresh lime at $10	195.75
Daily saving in cost of lime	$41.01
The account should be credited with a reduction in alkali loss of, say, from 5 per cent to ½ of 1 per cent brought about by washing the sludge on filters. On this basis there would be an additional daily saving, as compared to A, Table 1, of	$3.00
Total saving in cost of operation	$94.01
Saving in one year of 300 days	28,203.00
Return on investment of $62,710	45.0%

*Item 2, above, can be eliminated if the lime recovery unit is operated in connection with our continuous causticizing plant. See Tables 1 and 2.

†If an old sludge pile is available it can be utilized as a supply of makeup lime.

Data as Basis of Study

Although the purpose of this Bulletin is, primarily, to bring our continuous system of causticization to the attention of soda and sulphate pulp manufacturers we wish to say that its use is not restricted to this field alone. There are other industries, in connection with which the preparation of caustic liquor is an important process, that could improve operation and reduce costs by adopting this system.

In order that we may render effective service in the solution of problems which involve causticization and the filtration and disposal of sludges we would ask that we be given complete information concerning the nature of the process, present methods of handling, and the results that are desired.

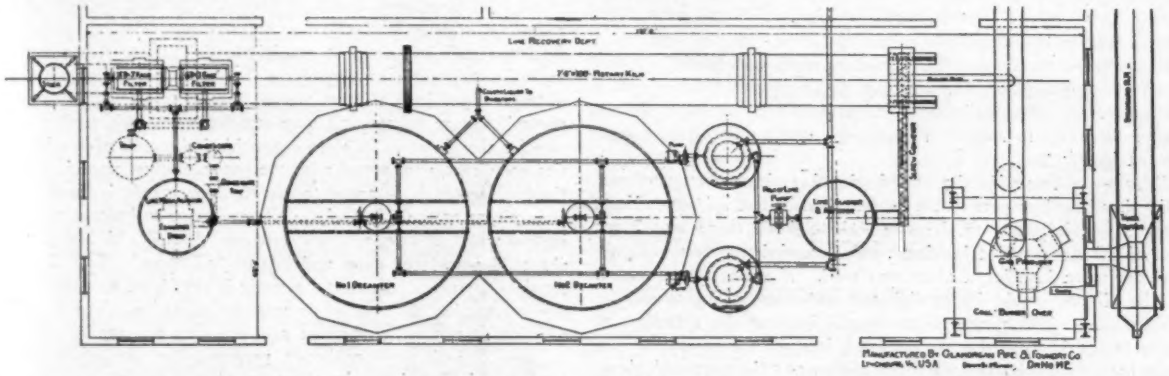


FIG. 6. PLAN OF CONTINUOUS CAUSTICIZING AND LIME RECOVERY PLANT. THREE MEN PER SHIFT CAN HANDLE THE ENTIRE OPERATION, WHICH REQUIRES ONLY 5,891 SQ. FT. OF FLOOR SPACE

TABLE 2

CAUSTICIZING PLANT FOR MILLS PRODUCING 50 TONS SODA PULP DAILY

Caustic required, approximately 50,000 lb. Liquor equivalent, 65,500 gal. at 13° B.

CONTINUOUS PROCESS WITHOUT LIME RECOVERY

Floor space required, 3,655 sq. ft. Estimated cost of plant, $58,490.

		Operation Costs
1.	Interest and depreciation: 16 per cent on $58,490	$25.60
2.	Live steam: 9,100 lb. at 42c. per 1,000 lb	3.82*
3.	Labor: 3 men per 8 hr. shift at 40c	28.80†
4.	Power: 1432 kw.-hr. at 1.95c	27.92
5.	½ of 1 per cent alkali loss: 327.5 lb. at $36 ton	5.90
6.	Lime: 19.575 tons at $10	195.75
7.	Repairs and supplies at 15c ton caustic	3.75
	Per diem cost of operation	$291.54
	Daily saving as compared to A, Table 1	48.27
	Saving in one year of 300 days	14,481.50
	Return on investment of $58,490	24.8%

*This item can be eliminated if exhaust steam at 10 lb. pressure is avaliable.

†No extra labor would be required if our lime recovery plant is addeed.

NOTE—Return on larger plant would be greater, as labor would remain constant and installation cost would not increase in proportion to increase in capacity.

TABLE 3

Lime Recovery Plant for Mill Producing 50 Tons Soda Pulp Daily. Operated in Connection with Batch Process

Floor space required, 3,483 sq. ft. Estimated cost of plant, $62,710.

		Operation Costs
1.	Interest and depreciation: 16 per cent on $62,710	$27.50
2.	Labor: 2 men per 8 hour shift at 40c	19.20*
3.	Power: 1,522 kw.-hr. at 1.95c	29.68
4.	Fuel: 7.7 tons coal at $7	53.90
5.	Makeup lime: 1.957 tons at $10	19.57†
6.	Repairs and supplies at 25c. per ton	4.89

As a rule we need the following data as a basis for the study of filter requirements:

1. Elevation above sea level.
2. The percentage of solids in the material as it would come to the filter.
3. The percentage of liquid in the material as it would come to the filter.
4. The specific gravity of each.
5. The temperature of the material as it would come to the filter.
6. Chemical composition of solids and of filtrate.
7. If the material is acid, alkaline, or neutral.
8. The percentage of solids in the sludge after the material has been allowed to settle for 12 hours.
9. Physical condition of solids; i. e., whether they are granular, slimy, colloidal, or coagulated.
10. Degree of fineness of solids.
11. Whether or not it is necessary to wash the cake on the filter and, if so, whether it is desired to separate the wash from the filtrate.
12. Capacity desired in tons per 24 hours, bone dry basis or in gallons of filtrate.
13. Whether or not a sample could be sent to us for examination and trial.

SILICATE OF SODA IN THE PAPER INDUSTRY

(A Review)

By William Stericker, Ph.D., Philadelphia Quartz Co., Philadelphia, Pa.

Sizing

Ink Resistance—According to Blasweiler there have been sporadic attempts for over 40 years to use either sodium or potassium silicate as substitutes for rosin in paper sizing. It was not until 1907 that Klemm[1] pointed out that both silicate and rosin might have a place in paper. Sizing is frequently considered to mean the resistance to the penetration of aqueous inks. This is not a satisfactory standard for printing papers since printers' inks are actually oil varnishes. Rosin sizes against aqueous solutions but not against oily liquids. Silicate is valuable for the latter. Although 16 years have elapsed since Klemm's article appeared, the distinction is not fully recognized in the paper trade even now.

Method—The method of using the silicate depends to a large extent on the kind of paper and the regular practice in the mill. The following[2] has been found to give maximum retention in many cases. It is also advantageous because it interferes to the least extent with the routine of the mill operation. The silicate is added to the pulp in the beater before any color or other size has been added. Sufficient alum[3] is then added to precipitate the silicate and the rest of the process carried out as if there were no silicate present. Sodium metasilicate[4] is of no value for this use while the higher the ratio to soda in the silicate solution the better results are obtained.[2, 5]

Effects—In discussing the use of trimmings from corrugated and solid fiber board as part of the beater furnish Bert said the silicate present was injurious to the size. He claimed there was 7 per cent of silicate in such trimmings[6]. Vail[7] replied that this was only the case when insufficient alum was used. If enough were added, all the silicate would be precipitated and slack sizing would be avoided. In addition, the silicate would increase the retention of the rosin and improve the hardness and finish of the paper.

An individual, who prefers to be known as "Greaseproof" gives the following description of the effect of silicate. When acids or acid salts are added to soluble silicates in the beater, silica is precipitated as a gelatinous hydrate. This permits the pulp to carry more water onto the machine and hardens the paper. Vail[2] has given a more extended description of the effects of silicate. These results are based on mill tests with large quantities of paper using 2-4 per cent of silicate. There was an average increase of 12 per cent in the Mullen test. The ink resistance was increased, probably due to the increased retention of rosin.[8] If the silicate is carefully added to the correct time, there are no deleterious effects on the colors. When no rosin is used, discoloration on aging is minimized. The hardness, rattle and finish of the sheet are improved.

Blasweiler has carried out a long series of experiments under the direction of Emil Heuser, one of Germany's greatest paper and cellulose experts.[9] He used $Na_2O.3.3SiO_2$ using from 5 to 30 per cent of silicate. The experiments were made in a 30 liter hollander using 2.5-3 per cent of pulp. The results found confirm and extend those previously mentioned. In every test the tensile strength of the paper made with silicate was increased. The maximum was 18.5 per cent which was obtained with news print. The hardness and rattle or snap were greater. The finish and feel were improved. The suction on the paper machine was good and there was no sticking on the press rolls so less water could be used. The suspended matter in the backwater settled rapidly and completely. The colors were brightened and did not fade as rapidly on silicated papers. The cut paper lay flat and the behavior with printers' ink was improved. The silicate also increased the retention of loading materials.

Straw Paper—A. R., who translated this work into French, was led to tell of his own experience with silicate in sizing straw paper.[11] In order to speed up production the digestion of straw was carried out under high pressures. This caused hydrolysis and porous paper resulted. When meat was wrapped in it, the paper soaked and tore easily. Since most of the sales were to butchers, a method of sizing had to be found. Rosin could be used but too expensive. Equally good results could be obtained by the use of 10-2 per cent of silicate precipiated with alum. The former method cost more than 400 francs, the latter about 60 francs.

Alum—Blasweiler[10] found it advisable to add enough alum to make the solution distinctly but not strongly acid. In spite of the fact that sufficient alum to precipitate the silicate seems necessary in order to secure any good results, there are mills which consistently use silicate without any alum to take care of it. They apparently secure effects that they can detect and which they believe pay for the silicate. In some cases this is because of special qualities not directly connected with the paper. When alum is not used, the back-water is returned to the machine. This is good practice in any case as the effect of the silicate seems to become cumulative in this way. 100 pounds of "A-Syrup" (Na_2O .3.3 SiO_2) require about 30 pounds of alum and 100 of "S" Brand ($Na_2O.3.9$ SiO_2) require 25 pounds. In case the water is very hard or contains some acidic material, these amounts may be excessive. The intentional addition of salt or magnesium sulphate does not pay for itself.[10]

Alum Substitutes—Frohberg[12] proposed the use of magnesium sulphate of alum but Blasweiler found that it did not give good results in the presence of paper stock. Any substitute has to compete with the additional sizing effect due to the aluminum hydrate or silicate formed by the interaction of alum and silicate. Klason[13] used sulphate waste liquor to precipitate the silicate. The rattle and finish were improved but the paper was yellowish. Franck has patented the use of fluosilicates as precipitants. So far as is evident they are not actually used. It is claimed[14] that silicate and alum may be used as a dry powder. The silicate is sprayed on solid aluminum sulphate and the mixture is then dried and ground.

Rosin—When both silicate and rosin are used, the paper is sized for either aqueous or oily liquids. In addition, the use of silicate increases the retention of the rosin. Usually the silicate and the rosin are added to the beater in their usual form but there have been a number of proposals to combine them. Kaldkepp and Graff[15] mixed rosin and silicate in the cold to prevent the precipitation of silicic acid. Sommer[16] found that finely pulverized or emulsified rosin would dissolve in dilute silicate solutions. "Greaseproof" says that boiling silicate solutions dissolve powdered rosin forming a size similar to brown rosin soap.[8] It is important to use no more silicate than is necessary. The writer's work indicates that rosin dissolves more readily in the more alkaline silicates ($Na_2O.2SiO_2$). When hot concentrated solutions of $Na_2O.3.3SiO_2$ were used, there was always a separation of rosin soap.

In 1920 Clapp proposed the use of freshly precipitated calcium

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[1] Wochbl. Papierfabr. 38, 1893-5 (1907).
[2] Vail, Paper 29, No. 6, 1920 (1921); Paper Trade J. 73, No. 17, 32-4 (1921); Chem. & Met. Eng. 25, 823-4 (1921).
[3] The term "alum" is used for aluminum sulphate or papermakers' alum throughout this report.
[4] Blasweiler, Papierfabr. 19, 809-16, 875-7 (1921); Paper 28, No. 22, 20-2, No. 24, 20-2; 29, 6, 19-20.
[5] Papeterie 43, 1058-66 (1921).
[6] Fibre Containers 6, No. 2-14 (1921).
[7] Ibid. No. 3, 16.
[8] Papeterie 43, 1058-66 (1921).
[9] Possibly due also to an increased hydration of the fibers.
[10] Papierfabr. 19, 809-16, 875-7, 992-7, 1,108-11, 1,217-23 (1921). A condensed translation by West appeared in Paper 28, No. 22, 20-21; No. 24, 20-2; No. 6, 19-20. The original articles have appeared as a book "Die Verwendung von Wasserglas zum Leimen von Papierstoff." (Elsner, Berlin, 1922.)
[11] Papeterie 43, 1,077 (1921); 44, 58-61 (1922).

silicate and aluminum resinate as a size for counter board.[17] The size was formed by the reaction of hydrated lime, sodium resinate, silicate of soda, and alum.

Bakelite—The use of silicate with bakelite for sizing have been patented in Germany. It is claimed that good results were obtained.[18] West[19] says that the bakelite is used to bind the precipitated silica to the fibers but it seems more likely that it acts like rosin. Unless it shows decided advantages, bakelite will be too expensive to be practical.

Starch—In 1910 Fues[20] applied for a patent on the precipitation of starch for sizing paper in the presence of silicon compounds but Klem was able to show that he had previously used silicate with starch. Wrede[21] found that silicate and starch were better than silicate alone for sizing against non-aqueous materials. Since silicate is cheaper than starch and increases the retention of the latter, its use is advisable. The mixture increases the strength and rattle of the sheet and the retention of any filler. Fues claimed to be able to secure practically quantitative precipitation of the colloids at exact neutrality. Wrede recommended a strong excess of alum but only recovered 60 to 70 per cent of the starch.

In a later article[22] Wrede claims that starch not only improves the quality but reduces the cost of manufacturing paper. It is most economical to swell the starch, add silicate, and then put the mixture in the beater. When used in writing paper, this mixture increases the strength and gives a better finish and a harder feel. Since the paper is harder and tougher, it stands erasure better. For this kind of paper it is recommended that the silicate and starch be added after the rosin size has been precipitated. In print papers it should be added after the fillers. In all papers where raw starch is used as a filler, 2 to 4 liters of silicate should be used with each kilogram of starch.

Soaps—Kolb claims[23] that soaps, especially the stearates, may be used to replace rosin size. When used in connection with sodium silicate, they give pronounced size-fastness and good feel. The silicate increases the sizing action by increasing the surface area of the other materials. Blasweiler investigated both soy bean and cottonseed oil soap with and without silicate but was unable to find sufficient improvement to pay for their use. For example, 5 per cent of cottonseed oil soap, 5 per cent of 38° silicate ($Na_2O.3.3SiO_2$), and 10 per cent of alum increased the tensile strength but decreased the stretch of the sheet.

Glue—Muller[24] dissolves one part of glue in 6 parts of water using the usual method. While the solution is still warm, he adds a solution of one part of 38° Bé. silicate in 8 parts of water. When the solution has cooled, he stirs in a solution of alum. An excess of alum has to be avoided so that the mixture is not completely precipitated. This material is added to the furnish followed by enough alum to give a faintly acid reaction. Muller considers that the fibers are coated since the brilliancy, the handle, and the fullness of the paper are improved. In addition, the retention of the fibers and loading materials is greater. Other colloids may be used in place of glue and acids or acid salts instead of alum. In any event the size would be produced before the pulp is present.

Other Materials—Kuldkepp and Graf[25] have patented mixtures of casein or casein-like substances with silicate. Stein[26] has covered the use of algin with inorganic colloids. Possaner found silicate in a number of commercial sizes sold in Germany.[27] Humic acid is said to give satisfactory sizing when used with silicate.[27]

Fillers—All the investigators find that silicate increases the retention of loading materials. Reichard obtains two distinct effects by the use of silicate.[28] Ordinarily when very heavy material like barium sulphate are used to load paper, a large proportion settles out. If silicate is added to the suspension, it acts as a stabilizing medium. When the silicate is precipitated in the beater, it carries the loading material into the paper. Magnesium chloride is prefered as a precipitating agent.

Blasweiler included experiments on news print containing 80 per cent mechanical wood pulp and 20 per cent bleached Mitscherlich pulp. The use of silicate increased the retention of the china clay used as a filler and, at the same time, increased the tensile strength and improved the color.

Paper for wrapping oranges and lemons was made[29] from 30 per cent white paper trimmings, 10 per cent fine white ground wood, 30 per cent unbleached Mitscherlich, 20 per cent semi-bleached sulphate, and 10 per cent waste paper. About 1 per cent was added and precipitated with alum. Approximately 5 per cent of talc colored with rosin was also used. The talc was credited with giving the paper a smooth feel and preventing molds. It seems likely that the silicate helped in these effects. The use of silicate in connection with talc is also mentioned in a patent to Altmann.[30]

Color Lakes—Silicate is not only used to increase the rention of loading materials but also of colors.[31] When silicate is precipitated by the action of magnesium or aluminum sulphate or calcium chloride in the presence of a dye, the dye will be strongly absorbed if it is basic, weakly if it is substantive, and not at all if it is acid. The magnesium precipitate is best for basic dyes and the aluminum one for substantive dyes with the calcium intermediate in both cases. The dyes thus held are quite fast but the acid ones wash out. The retention of silica is greatest when alum and a basic dye are used. Color lakes of this type are on the market in England.

Coating and Tub Sizing

Artus[32] was the first to propose the use of silicate of soda for coating paper. He treated moderately strong writing paper with two coats of silicate of unknown composition diluted to 15.9° Bé. (sp. gr. 1.12 to 1.15). The first coat was allowed to dry before the second was applied. Paper treated in this manner could be used for packing salves and plasters. Concentrated silicate solutions gave a beautiful glassy coat but the paper broke when rolled. Silicate is now widely used for grease-proofing paper. It is also used as a preliminary coat under paraffin to reduce the consumption of the latter. For this work 35° solutions $Na_2O.3.3SiO_2$ are used.

Although silicate alone will grease-proof paper, Cavanaugh[33] has patented a paste composed of 11 lb. of silicate, 4 oz. of mica, 10 oz. glycerol, 3 oz. of powdered dextrin, and sufficient precipitated chalk to thicken.

Waterproofing—Paper is usually waterproofed with paraffin alone or paraffin over silicate. It is claimed[34] that it can be done by passing dry paper through a bath of a hot mixture containing 50 per cent resin, 45 per cent paraffin, and 5 per cent silicate. The proportions of resin and paraffin can be varied up to 10 per cent.

Tub Sizing—Wezel[35] dissolved horn shavings in caustic soda and added silicate. This solution was mixed with potato starch and then nearly neutralized with acetic or a dilute mineral acid. The mixture was then used as a tub size.

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[17] Wochbl. Papierfabr, 44, 4250-2 (1913).
[18] Papier-Ztg., No. 34, 1315 (1907).
[19] Papermakers' Monthly J., No. 4, 122-3 (1911).
[20] Ger. Pat. 245,975.
[21] Ger. Pat. 257,816.
[22] U. S. Pat. 1,345,317, June 19, 1920.
[23] Holzverkohlungs-Industrie Akt. Ges., Ger. Pat. 338,396 (1921).
[24] Paper Trade J. 73, No. 15, 52 (1921).
[25] Wochbl. Papierfabr. 44, 1,223 (1913).
[26] Ibid. 835-41.
[27] Papierfabr. Paper 31, No. 12, 11 (1923).
[28] Papierfabr. 19, 1,141-4 (1921).
[29] Ger. Pat. 317,948 (1920).
[30] Aus. Pat.
[31] Chem.-Ztg. 38, 100 (1914).
[32] Ger. Pats, reviewed by West. Paper Trade J. 75, No. 1, 55 (1922).
[33] Brit. Pat. 177,137 (Nov. 24, 1921); see also Fr. Pat. 543,763; Paper 31, No. 20.
[34] Papeterie 41, 634 (1919).
[35] Ger. Pat. 288,106.
[36] Heuser and Behr, Papierfabr. (1923) 1-6; Paper 31, No. 18, 7-12 (1923); Heuser, Paper Maker 64, 433 (1922).
[37] *Chem. Zentr.* 28, 749 (1857).
[38] U. S. Pat. 1,357,844 (Nov. 2, 1920).
[39] Papier 22, 358 (1919).
[40] U. S. Pat. 686,374 (Nov. 12, 1901).

Size and Adhesive—Morrison[36] developed a size which can also be used as an adhesive on wallboard. It consists of 3 to 15 per cent silicate of soda, 1 to 7 per cent glue or other organic adhesive, and 1 to 8 per cent pottery clay or other filler. In no case should the organic adhesive exceed the silicate. This size gives a higher Mullen test, decreases the absorption of ink or paint, and excludes moisture. Morrison soaked 37.5 pounds of high grade glue for 36 hours in 75 gallons of cold water. He then heated the mixture to 130 to 60° F. for 15 minutes, slowly, and added 25 gallons of 40° silicate while stirring. After this 29 pounds of pottery clay were worked in. If desired, the silicate and clay may be mixed and then added to the glue solution.

De-Inking—Silicate has been used in de-inking paper[37] If the ink has a mineral oil base, hydrated lime is said to aid in the process.[38]

[36] U. S. Pat. 1,365,715 (Jan. 18, 1921), assigned to the Cornell Wood Products Co.
[37] Bancroft, Chem. Met. Eng. 23, 454-6 (1920).
[38] Jespersen, U. S. Pat. 1,424,411 (Aug. 1, 1922).

Make Borings for Paper Plant

CALAIS, Me., December 4, 1923.—Engineers employed by the Hollingsworth and Whitney Paper Company are making borings and tests for foundations for the big pulp and paper plant to be erected by this corporation at St. Stephen, N. B., across the St. Croix river from Calais.

Location of the mill will probably be at the lower boundary of St. Stephen, where Hollingsworth and Whitney have bought holdings on both sides of the mouth of Porter mill stream. Water power rights have been secured at Milltown, N. B., in connection with the project.

The Hollingsworth and Whitney Company, with offices in Boston, and mills at Waterville and Gardiner, Me., is one of the largest pulp and paper companies in the United States, owning thousands of acres in the Moosehead lake district of Maine, and are reported to have recently acquired extensive timber holdings on the Canadian side of the upper St. Croix river, and elsewhere in the maritime provinces.

CURRENT PAPER TRADE LITERATURE

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Pulp and Paper Industry

Constitution of Spruce Wood Lignin. P. Klason. *Tids. for Kemi Og Bergvaesen* 2, 53-56, 69-72 (1922). *Chem. Abs.* 17, 3168. Klason finally admits the possibility of a variation of his lotest proposed lignin formula whereby a CH_2 group should not be situated in the flavone nucleus but between this and the coniferyl nucleus. He gives this variation some advantage, especially if one might suppose that lignin is formed spontaneously by polymerization of coniferyl aldehyde, which should also explain the optical inactivity of lignin.—C. J. W.

Lignin. J. Grüss. *Ber. Botan. Ges.* 41, 48-52 (1923); *Chem. Abs.* 17, 3168. The lignin was prepared by extraction of wood pulp paper fiber with 4% sodium hydroxide and with water. A better yield was obtained from beechwood chips which, however, require a further extraction with alcohol and ether. The purified material, after hydrolysis with alcoholic hydrochloric acid, gave a substance which appears to be a lignin ester or alcohol, forming a yellow-white powder, soluble in alcohol, chloroform, and acetone. It dissolves in alkalies with a yellow-brown color, gives a brown-violet color with concentrated sulphuric acid and a red one with phloroglucinol and hydrochloric acid in alcohol. Crystals gradually form upon boiling and the alkaline solution and the precipitate obtained by acidifying the mother liquor with acetic acid no longer give the red phloroglucinol reaction. The lignin alcohol was split and the benzine nucleus went into the crystalline precipitate. This precipitate colors red-violet with iodine and concentrated sulphuric acid, changing into a viscous mass. The precipitate decolorizes slightly and becomes crystalline upon refluxing with 1.5% sulphuric acid but does not saccharify; it no longer dissolves in alkali nor colors with iodine and acid. This property and the failure of the characteristic coloring with resorcinol and hydrochloric acid shows that in lignin alcohol the cellulose residue is combined with the benzine nucleus. The test given for the detection of lignification is solution of a milligram of the precipitated lignin alcohol in absolute alcohol and twice the quantity of pyrocatechol, acidification with hydrochloric acid, and stratification over concentrated sulphuric acid. The interphase is colored brown-violet shading into amethyst-violet. Coniferin gives a violet-orange, vanillin a rose-red. The colors are similar but quite distinguishable. Lignin was found by this test in newspaper and in coals.—C. J. W.

Analytical Investigation of the Chemical Composition of α-Ligninsulphonic Acid. P. Klason. *Svensk Pappers Tid.* 25, 364-366, 385-388 (1922). A purely chemical study, fully abstracted in *Chem. Abs.* 17, 3168-3169.—C. J. W.

Beating

Motor Drive and Control for Beaters. O. C. Cordes. *Paper Mill* 47, No. 33, 4 (August 18, 1923); *Paper* 32, 18, 10, 11 (Aug. 22, 1923). Brief discussion of the requirements of beater drives showing the advantages of individual motor over line shaft drive and the merits and demerits of silent chain type of drive.—A. P.-C.

Method of Beating Pulp. A. E. Ryberg and P. C. Schaaning. Eng. pat. 194,658, Sept. 8, 1922. Compressed air or gas is introduced into the stock before or during its admission to the beater, and may in addition be introduced into the beater itself. The passage of air through the stock enables the fibrous material to be fed into the beater with relatively little water and thereby effects a considerable saving in power.—A. P.-C.

Beater. R. J. Marx. Fr. pat. 555,152. In beaters having a spiral shaped trough the stock is carried around by the roll for about three-quarters of its circumference, and is directed into the trough by means of a suitable doctor. According to the invention, the hood over the rolls is continued some distance over the trough, and the latter is built, back of the roll, in such a manner as to deflect the stock and make it take a course almost parallel to the axis of the roll. A spray of water is provided under the doctor which helps to make the stock flow more readily in the trough.—A. P.-C.

Sizing for Paper. P. W. Codwise. U. S. pat. 1,449,892, Mar. 27, 1923. Hot water containing previously washed alum-tawed leather is treated with sufficient aluminum sulphate to bring the content of the latter altogether to 10% of the dry solids present, to form a sizing which is of light color.—A. P.-C.

Sizing for Paper or Cloth. R. Kaiser assignor to T. M. Duche & Sons. U. S. pat. 1,448,847, Mar. 20, 1923. A dry sizing solution in water is formed of Karaya gum 98.5% and oxalic acid 1.5%.—A. P.-C.

Sutherland Co. to Erect Addition

KALAMAZOO, Mich., December 5, 1923.—The Sutherland Paper Company has awarded to the O. F. Miller Company, the contract for the erection of an addition to the carton printing department. It will be a mill construction building, of irregular triangular proportions, with about 5,000 square feet of floor space. It will fill in that section of ground immediately in the rear of the present printing unit. It will make possible a 30 per cent increased production. Work has started on the foundation. The building should be under cover early in January.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

"HOW TO SELL YOURSELF SUCCESSFULLY"*

By Joseph L. Lange, 50 East 42nd Street, New York City

I am going to talk to you on "How to sell yourself successfully" or "The Faculty of Speech" and its importance to you in the selling of IDEAS, MERCHANDISE and SERVICE.

In speaking, it is well to keep in mind that it is what a listener hears and not what you mean that influence him. Most of the misunderstanding that we have in the business world, and for that matter in all of our social relations, is caused by the improper use of words—saying one thing when we mean another.

An Irishman coming out of ether in the ward after an operation exclaimed, "Thank goodness that's over!"

"Don't be too sure," said the man in the next bed. "They left a sponge in me and had to cut me open again."

A patient on the other side said, "Why, they had to cut me open, too, to find one of their instruments."

You see both of these patients said what they meant and meant what they said. There was no room for misunderstanding on Pat's part.

But, just then the surgeon who had operated on the Irishman stuck his head in the door and yelled: "Has anybody seen my hat?" Pat fainted.

A millionaire (speaking to a body of students) said:

"All my success, all my tremendous financial prestige, I owe to one thing—pluck, Pluck, PLUCK."

But one student asked: "How are we to find the right people to pluck?"

A certain lady said her husband's average income was about midnight.

Some time ago I was reading a book on the subject of SPEECH and I came across a statement by the author that, to say the least, was a shock to me and I know it will be to you.

Are Man and Baboon Nearly Alike?

He said, in substance, that there was very little difference between the human being and the baboon.

For years I have been eulogizing MAN. I have thought of him as the greatest of all creations, the kingpin of this terrestial globe. You can imagine how I felt after reading what that fellow wrote—that there was very little difference between MAN and MONK.

THINK OF IT—MAN who has subjugated wild animals, harnessed the forces of nature, forced Mother Earth to feed him and bear his burdens; MAN who has out-rivalled the eagle in its flight and performed greater gymnastics with his airships than even the birds can do; MAN who has explored the depths of the ocean and virtually outdone the fish in their own elements; MAN who can send his voice across continents almost as fast as thoughts can travel; yet this author would have us believe that man differs very litle from the gibbering baboon.

He not only makes the statement but he proves it, and when I got that far in the book I was about to throw it away in disgust—when, fortunately for me, my eyes rested on the next paragraph in which the author said:

> "But there is one physiological standard by which MAN can be truly measured and which applies to him alone and which surrounds his whole marvelous being and distinguishes him from all other mammals, and this is THE FACULTY OF SPEECH."

In other words, the immeasurable distance between MAN and every other animal on earth is fully accounted for by the existence, the nature and significance of MAN'S WORDS." After reading this I closed the book and did some tall thinking. If man's chief difference between him and a baboon lies in his faculty of speech, what a mighty small difference there is in some people.

In discussing a subject it is well to start at the beginning of it. The beginning of one's power of speech is the alphabet. In my school days we were taught the alphabet. I remember how we used to sing-song our way through it. I understand that they have now done away with this step and start in by teaching a word. Some of you young fellows may have been taught by the newer method and consequently have not the advantage of us old ones in this respect—so I will give you the alphabet:

A Ambition
B Brains
C Control
D Determination
E Enthusiasm
F Fearlessness
G Grasp
H Health
I Interest
J Judgment
K Knowledge
L Loyalty
M Manliness
N Nerve
O Optimism
P Personality
Q Quality

*Address delivered at Tenth Semi-Annual Convention of Cost Association of the Paper Industry at Sylvania Hotel, Philadelphia, Nov. 22, 1923.

R Reliability
S Sobriety
T Tact
U Usefulness
V Veracity
W Will
X X-perience
Y Years
Z Zeal

This might be well called the alphabet of CHARACTER for the sum of these qualities spell CHARACTER. This alphabet is not only to be learned, but to be lived.

We are told there are over 300,000 words in the American language. We are also told that the average man gets along after a fashion with a limited number of these words. It is said that a woman has 800 words in her vocabulary and that 763 of them are about clothes.

The unit of one's vocabulary is the word, just as the unit of a man's wealth is the dollar. When we say a man is rich we mean he owns a great many dollars; likewise a vocabulary is rich if it contains a large number of words.

When we speak of a man as a financial power, we mean that he not only has a great many dollars but he knows how to use them to accomplish his purpose. In the same manner a man is a power in the realm of speech when he uses his extensive vocabulary in such a manner as to accomplish the end he desires to attain.

Set a Value on Each Word

It is a good thought to set a value on each word, just as we do on the dollar. A man is a spendthrift who throws his money away recklessly and he is considered foolish who pays two dollars for a dollar article.

It is speech—not silence—that is golden, but too free use of words makes one verbose.

It is difficult to over-estimate the handicap under which a salesman works who has a too limited vocabularly. He finds himself unable to express himself as he would like to. He must perforce use the same word over and over again—overwork it, so to speak, until it loses its force.

Such a salesman is like a host who is trying to entertain his guest with his phonograph music. He has only a few records and after playing them once he plays them again and then again, until finally the audience is so sick and tired of listening to his music that they beat a hasty retreat.

A dictionary is within the reach of every person nowadays. It is really the cheapest book a person can buy and should be the daily companion of every salesman. With very little effort a salesman can add a word a day to his vocabulary—365 a year, and in a very few years he can acquire an extensive vocabulary—one that will permit him to present his ideas and dress his thoughts in a presentable and acceptable way.

Edwin Markham said that words are as deep as the man that utters them. The man an inch deep has words an inch deep. The words of great men sink deep. For 2,000 years we have been digging to get at the bottom of THE MASTER'S words.

In a sense a man is just as big as his regard for his own word. There is a power in words when we know how to use them, and when we do not they are just so many meaningless sounds. There is something we are trying to do with our words and when that is done we must recognize the psychological moment and know when to stop talking.

MARK TWAIN told of an incident which illustrates this point:

He was invited to listen to an address given by a great preacher who was soliciting funds for some missionary work in Africa.

In the first part of the talk, WHEN the missionary depicted the condition of the natives and how sorely they were in need of religious and educational training, he was so affected that Mark Twain promised himself when the plate was passed he would put in $100.

As the minister kept on preaching, Mark Twain reconsidered his first decision and thought that possibly $50 would be his limit.

BUT the minister kept on preaching and Mark Twain decided that he would give $10.

Mark Twain said that by the time the plate was passed, he took $10 out of it.

This minister, because he did not know when to stop talking, cheated himself out of $110. I wonder how much we have lost in the same way. There is such a thing as talking your prospective customer into a mental frame of mind that will result in a sale and then talking him out of it. In considering the kind of words we are to use on an occasion we must keep in mind the limitations of the listener. There are salesmen who are guilty of talking over the heads of their customers. They use words that are not commonly understood.

I think this point is well illustrated in the story of the section-hand who was killed. Four of his co-workers were appointed as his pall-bearers. They had never acted in that capacity before, so when they brought the corpse to the church (which, by the way, was a Catholic Church) they made the mistake of bringing it in wrong end, etc.

It is the custom in the Catholic Church to have the priest meet the funeral procession at the door and bless the remains before being brought into the chancel of the church.

When the priest met the procession and saw they were bringing in the corpse, wrong end to, he said in his most dignified tones—"REVERSE THE CORPSE!"

These poor, ignorant section hands had never heard that kind of language before and it meant absolutely nothing to them. Consequently, they made no move.

Again the priest said to them in a loud tone—"REVERSE THE CORPSE!" But they made no move.

Fortunately, the section boss happened along about this time and he said to the priest: "Let me handle this." Then in a loud whisper that could be heard all over the church and out into the street, he said: "Boys, end to end with the bloody box."

Though this speech was not merely as ornamental as the priest's, yet it brought the desired result, and it is results that count.

Words Should Fit Occasion

This illustration is not intended to convey the idea that you must use slang, rather it is to bring home this point—that a salesman should have a complete equipment of words that will fit every occasion.

When we realize that speech, spoken and written, is the medium by which men must convey their ideas; that it is the only vehicle for communicating TRUTH; that society, individually and collectively, every moment, may be swayed and moulded by it; that it is, in fact, the very foundation of intellectual and moral progress, the QUESTION of its effectiveness is SEEN to be of vital moment.

The QUESTION becomes of even greater concern when we consider how much of speech fails of its purpose.

The TEACHER seeks to impart his knowledge and discovers that the pupils do not comprehend;

The PREACHER discources patiently to his congregation but fails to influence;

The LAWYER talks earnestly to the jury but loses his case;
The POLITICIAN harangues the crowd but fails of election;
The SALESMAN dilates upon his wares but makes no sale;
The FATHER talks to the son but secures no reform——
And this——though the teacher has important history to impart;
The preacher, golden truths;
The lawyer, unquestioned facts;
The politician, a just policy;
The salesman, excellent wares;

The father; good counsel; all for the reason that they have little or no appreciation of the principles that govern effectiveness in speaking.

The main reason for this is a failure to realize that effective speaking is an art founded upon the Science of Psychology; an art, the mastery of which demands the same earnest thought, the same persistent practice, as the mastery of painting or music.

The common error in regard to speaking is the assumption that all that is necessary is to have "SOMETHING TO SAY."

Utterly False

Unless that something to say is said in accordance with the law of the human mind—PSYCHOLOGY, it might as well be said to the winds.

Let anyone who THINKS that "SOMETHING TO SAY" is the only requisite to effectiveness in speaking ask himself how much of all that he has heard has left a permanent impression upon his mind and he will at once realize how necessary is the knowledge of the art of SUCCESSFUL SPEAKING.

Salesmen must then rid themselves of the notion that "SOMETHING TO SAY" is sufficient; that the impulsive utterance of an idea will have its secure belief in action.

He must realize that besides "SOMETHING TO SAY" he must learn how best to convey it.

"SOMETHING TO SAY" is like a bullet without the rifle and powder. It needs the addition of these two to send the bullet home to the target.

So "SOMETHING TO SAY" must be said in the right way.

I once heard the three rules of effective speaking:

The first of which is "HAVE SOMETHING TO SAY."

The second is "SAY IT."

The third is "SIT DOWN."

"SOMETHING TO SAY" is always in order. The "SOMETHING TO SAY" of the salesman is dependent upon his knowledge of the wares he has to sell. The ignorance of some salesmen about their wares is nothing short of apalling. As a consequence such salesmen have seldom anything to say about their goods that is worth listening to.

One cannot emphasize too much the importance of a salesman's knowledge of his wares, or for that matter, at all times knowing what he is talking about—having something worth while to say. The salesman who does not know his wares becomes a prey to the scheming buyer.

The salesman who does not understand the value of his own goods, who has not made a study of them, has no background to support him in competition, and when he runs against competition he throws up his hands and his first thought is that of cutting prices.

There was a salesman who sold toilet soaps successfully for years until a competitor came upon the scene and began to offer soap of the same size, put up as artistically and equally well perfumed, at a lower price.

The first salesman continued to work hard but lost ground. He wrote to the sales manager, stating all the facts, and asking for permission to reduce the price in order to meet competition.

The sales manager sent for him, and put the two soaps on the table.

The original article was cut in two and the scent was as good in the center as it was at the circumference.

The new article was cut in two and had no scent at all in the center; in fact the perfume came from the wrapper and not from the soap itself.

The first salesman went out on the road again and soon recovered the lost ground. Had he known his wares in the beginning, he would have been able to hold his own without the aid of the sales manager.

Must Know One's Wares

The salesman should be a veritable encyclopedia of knowledge pertaining to his wares and to everything relating to the service and policy of the house he represents. All of this is the "SOMETHING TO SAY."

The truly effective speaker or successful salesman knows from experience that before he can secure acceptance or belief in his idea, that too frequently he must overcome Error, Prejudice, Conceit, Fear and Ignorance.

All of these are barriers to conviction and can only be broken down by the application of certain PRINCIPLES of PSYCHOLOGY.

The salesman's business is OBJECTIVE. It concerns the buyer or prospect. It is a question of how can he get his listener to see his thought as clearly as he sees it, to feel it as vividly as he feels it, to believe it as deeply as he believes it, to act upon it as sincerely as he acts upon it.

Appreciation of all this will reveal to him the importance that nothing should be left to haphazard.

An architect, before planning his building, must know the purpose for which the structure is intended—whether it is to be a warehouse, an office building, a church, or a private residence. The efficiency of his work is dependent upon his knowledge. The same holds good in speaking.

The first requisite to effective speaking is a clear understanding of the general ends. You can classify all ends under these five heads—Clearness, Impressiveness, Belief, Action and Entertainment.

CLEARNESS is the end we are striving to attain when we are seeking to give information purely as information. Our object is to present the matter so that our listener can see it clearly.

This is the end of the dictionary, the railroad timetable (or at least it should be); the judge in rendering his decision, or the inventor in lecturing on his invention.

IMPRESSIVENESS implies vividness. The idea is not simply seen, it is felt. It appeals to the emotion. This is the end of the proud mother when praising her child, or of the soldier when extolling his regiment, or of the preacher when portraying the personality of THE MASTER.

BELIEF is acceptance. The speaker is not content that the listener shall see or feel, but what he says must be accepted as truth. The audience must say in effect "THAT IS SO—THAT IS RIGHT."

ACTION is doing. With this end in view the speaker wants his audience to act, to go, to give, to join, etc. In most cases this is the end of the salesman.

ENTERTAINMENT as an end is concerned in amusement arouses pleasant feelings, delights, and produces hearty laughter. It becomes the end, then the speaker places the amusement of the audience above all else. BUT, it is also of the greatest service as an aid to the other ends and should be part of the speaking equipment of every salesman.

The determination of the general end is of the utmost importance. It saves the speaker from falling into the pit of indefiniteness.

What would we think of a person who made an extensive preparation for a journey, when asked his destination, confessed that he did not know? Yet this is an every day experience with SOME salesmen.

The Motives Which Impel

As the salesman is most concerned in what means action on the part of the customer or prospect, let us look into the motives that impel men to action:

An impelling motive may be defined as man's INTELLECTUAL, SPIRITUAL, MORAL and MATERIAL wants.

For working purpose we will give them the following classification:

Self-Preservation, Property, Power, Reputation, Sentiments, Affections and Tastes.

By SELF-PRESERVATION I mean the desire to preserve life and health, the freedom from disease, injury or pain; or anything that will directly or indirectly affect our personal comfort. The power of this motive is self-evident. It is the paramount factor in the great majority of our actions. It largely determines what we shall eat or drink. It is the great appeal of the patent medicine man.

PROPERTY as an impelling motive means the desire for good lands and money. This desire is found in everyone. It is one of the great motives to action. The child wants to own the toy; the young girl, the handsome dress; the wife, the beautiful home; the merchant, the magnificent store; the capitalist, the greater return on his investments.

It impels the merchant to be courteous to his customers, and the financial magnet to plan and scheme.

It is this desire that sends the farmer to the field at 4 a. m. in the morning, and the miner to the dangerous coal pit. It is the motive that is the very foundation of our vast commercial and industrial structure.

Therefore, show clearly that a certain cause will add to the listener's goods or lands, or that it will increase his profits, and action ensues.

POWER as a motive means the desire to possess skill, force, energy, along every line of endeavor—the ability to be and to do. It includes the desire for authority and influence; the ability to sway and control men. Under this motive come nearly all ambitions; the desire for political power, social leadership, or commercial supremacy.

REPUTATION as an impelling motive means the desire for the good opinion and good-will of others. It is born of self-respect and pride. The impelling motive of reputation is great. There are men and women who would lose life rather than reputation.

Where this motive is properly appealed to it makes the indolent industrious; the miser, generous; the bully, gentle; the crook, an honest man. It is in most cases an irresistable appeal.

AFFECTION as an impelling motive means the desire for other people's welfare—father, mother, wife, children, employees and employer. Our town, city or country patriotism comes under this head, and you know what a strong appeal there was during the war, and what sacrifices were made in answer to that appeal.

SENTIMENT as an impelling motive includes the desire to do and be what is right, fair, honest, noble and true. It embraces duty, liberty and independence. Convince a listener that the thing you want him to do is just or generous; that it is in keeping with the highest ideals of manhood, and (other things being equal) he will take the desired step.

TASTE as an impelling motive means the desire for the finer pleasures of touch or taste, smell, hearing or sight. Tastes include the appetites in so far as they have an æsthetic side and ARE NOT LOOKED AT FROM THE POINT OF SELF-PRESERVATION. As a rule, the higher the scale of intelligence, the greater is the appeal.

Different Forms of Discourse

There are four forms of discourse: Narrative, Descriptive, Exhortative and Persuasive.

The NARRATIVE is the form used in telling a story. Frequently the ability to secure and hold attention through skill in telling a story is the entertaining wedge toward getting hold of the mind and heart of man and securing that sympathy between speaker and hearer so necessary for introducing the real object of your mission.

The DESCRIPTIVE is the form of discourse through which we bring out the merits of our proposition. In the description of our wares or proposition we must follow some coherent order; dovetailing each point so as to form a complete mosaic. In doing this you make it easy for your listener to understand and follow you.

The EXHORTATIVE form of discourse touches the heart of the listener and appeals to his emotional nature by the use of figurative language, painting vivid mental pictures that veritably burn themselves into his consciousness.

In the descriptive form we confine ourselves to the particular object or thing we have under consideration; whereas through EXHORTATION we generalize and make use of all and everything that we have in our "tool bag."

As the exhortative form of discourse is the most potent in arousing emotions, it is the discourse of the preacher, the lawyer, the statesman, whose aim it is to move their listener to belief and action.

BILLY SUNDAY'S great force is in the use of figurative language and in the exhortative form of discourse. In speaking of a sinner one day, he said:

"God has more trouble bringing a sinner to Heaven than the little kid had in drawing a cat backwards by the tail across a carpeted floor."

On another occasion he said, speaking of a dive-keeper:

"That man is so low down that when he dies he will have to take a stepladder to climb UP to Hell!"

The exhortative form of discourse is a powerful weapon to the salesman who knows how to use it.

PERSUASION combines something of all the other three forms, the object being to convince the hearer's intellect and reach his feelings for the sake of getting his WILL to DECIDE and act.

In suming up the Faculty of Speech in connection with the selling of Ideas, Merchandise and Service, let me add that—

The object of the NARRATIVE form of discourse is to GAIN Favorable Attention: DESCRIPTIVE, AROUSE Interest; EXHORTATVE, AROUSE Desire; PERSUASIVE, SECURE Decision and Action.

In the broad sense of the word we are all salesmen—we all have something to sell from the time we leave the cradle to the time we enter the grave, but how many can define what salesmanship means?

It is the power to persuade people to purchase your product at a profit.

Eddy Corporation's Annual

KALAMAZOO, Mich., December 1, 1923.—Felix Pagenstecher, president of the Bryant Paper Company and Charles A. Blaney, of the Wheeler-Blaney Company were elected directors of the Eddy Paper Corporation of Illinois, at the annual meeting in Chicago. At the same meeting Oscar Gumbinsky, Nathan Gumbinsky and A. L. Pratt, former president of the King Paper Company, were retired from the directorate.

Reports for the past year indicate an excellent run of business, while the outlook for the coming year is satisfactory. During the past twelve months numerous important improvements have been made at the company's plants in Three Rivers and White Pigeon, permitting of a marked reduction in the cost of production.

One act of the stockholders was to authorize the cancellation of 3,500 shares of preferred stock at $100 a share, or value of $350,000. This was held in the treasury to be issued if deemed necessary. The past year has been so satisfactory that it was decided to cancel the entire issue. This places the company's outstanding stock, 125,000 shares of no par value common, in a much more satisfactory position as to valuation and future earning possibilities. A large amount of the stock of the concern is held in Kalamazoo and vicinity.

George M. Seaman, of the Seaman Paper Company, Chicago, was retained as president of the Eddy corporation. The other officers elected are: Chairman of board, Charles W. Folds, Chicago; vice-president, H. L. Street, Chicago; treasurer, George T. Wolf, Three Rivers; secretary, William Edwards. The list of directors include: Felix Pagenstecher, Charles A. Blaney, Kalamazoo; George M. Seaman, Charles W. Folds, Charles Ward Seabury, A. J. McKay, H. L. Street, Robert M. Eastman, Edward R. Landsberg, Chicago; George T. Wolf, Three Rivers and J. E. French, French Paper Company, Niles, Mich.

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"IMPCO" TAILING SCREENER
FOR SCREENING GROUND WOOD TAILINGS

Very Low
Power
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Delivers
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WRITE FOR FULL DETAILS *CORRESPONDENCE A PLEASURE*

IMPROVED PAPER MACHINERY CO. Nashua, N. H.
SHERBROOKE MACHINERY CO., LIMITED, SHERBROOKE, CANADA

Imports and Exports of Paper and Paper Stock

NEW YORK, BOSTON, PHILADELPHIA AND OTHER PORTS

NEW YORK IMPORTS

WEEK ENDING DECEMBER 1, 1923

SUMMARY

News print.....1,854 rolls, 189 bls.
Printing paper.....78 cs., 335 bls., 602 rolls
Hangings .....83 bls., 13 cs.
Wall paper.....7 cs., 38 bls., 470 rolls
Cigarette paper .....113 cs.
Tissue paper .....19 cs.
Filter paper.....14 cs.
Packing paper.....1,865 rolls, 375 pkgs., 230 bls.
Wrapping paper.....4,706 rolls, 109 bls.
Kraft paper.....476 bls., 5 rolls
Colored paper .....31 cs.
Metal paper.....6 cs.
Drawing paper .....61 cs.
Tracing paper .....50 cs.
Photo paper .....2 cs.
Writing paper .....18 cs.
Surface coated paper.....144 cs.
Blue print paper.....26 rolls
Miscellaneous paper,
389 cs., 2,257 bls., 5,842 rolls, 529 pkgs.

CIGARETTE PAPER

P. J. Schweitzer, Minnekahda, Antwerp, 52 cs.
P. J. Schweitzer, La Savoie, Havre, 1 cs.
E. Waters, Valfiorita, Marseilles, 19 cs.
Standard Products Corporation, Indep. Hall, Havre, 41 cs.

WALL PAPER

W. H. S. Lloyd & Co., Celtic, Liverpool, 5 cs.
F. J. Emmerich, by same, 4 bls.
F. J. Emmerich, Aquitania, Liverpool, 7 bls.
F. J. Emmerich, Baltic, Liverpool, 27 bls., 2 cs.
The Prager Company, Minnekahda, Hamburg, 470 rolls.

PAPER HANGINGS

A. C. Dodman, Jr., Celtic, Liverpool, 30 bls.
W. H. S. Lloyd & Co., Maine, London, 33 bls., 9 cs.
W. H. S. Lloyd & Co., Minnewaska, London, 4 cs., 20 bls.

FILTER PAPER

H. Reeve Angel & Co., Inc., Minnewaska, London, 4 cs.
H. Reeve Angel & Co., Inc., Maine, London, 10 cs.

DRAWING PAPER

Devoe & Reynolds Company, Maine, London, 5 cs.
Favor, Ruhl & Co., by same, 5 cs.
Keuffel & Esser, Baltic, Liverpool, 3 cs.
Keuffel & Esser, Thuringia, Hamburg, 43 cs.
E. Dietzgen & Co., Elmsport, Rotterdam, 5 cs.

TRACING PAPER

E. Dietzgen & Co., Elmsport, Rotterdam, 17 cs.
E. Dietzgen & Co., Independence, Hamburg, 29 cs.
Keuffel & Esser, Samaria, Liverpool, 4 cs.

TISSUE PAPER

T. C. Strype, Samaria, Liverpool, 8 cs.
Meadows, Wye & Co., Baltic, Liverpool, 11 cs.

PHOTO PAPER

J. J. Gavin & Co., Baltic, Liverpool, 2 cs.

WRITING PAPER

Defiance Manufacturing Company, Valfiorita, Marseilles, 14 cs.
Lord & Taylor, Aquitania, Liverpool, 4 cs.

PRINTING PAPER

H. Reeve Angel & Co., Inc., Aquitania, Liverpool, 1 cs.
B. F. Drakenfeld & Co., Samaria, Liverpool, 18 cs.
B. F. Drakenfeld & Co., Baltic, Liverpool, 22 cs.
Canfield Paper Company, Rotterdam, Rotterdam, 30 cs.
Falsing Paper Company, Thuringia, Hamburg, 4 bls.
Steiner Paper Corporation, by same, 7 cs.
C. H. Young Publishing Company, by same, 141 rolls.
National City Bank, Independence, Hamburg, 266 bls.
Melby, Kuttroff & Co., Inc., Orbita, Hamburg, 10 rolls.
Chemical National Bank, by same, 55 rolls.
Hudson Trading Company, by same, 114 rolls.
C. H. Young Publishing Company, Hansa, Hamburg, 188 rolls.
J. H. Scott Paper Company, by same, 94 rolls.
Pulp & Paper Trading Company, by same, 65 bls.

NEWS PRINT

Newark *Morning Ledger*, Drottningholm, Gothenberg, 199 rolls.
Parsons & Whittemore, Pr. Fillmore, Bremen, 1,531 rolls.
W. Hartman & Co., Inc., Orbita, Hamburg, 164 bls.
Chemical National Bank, by same, 124 rolls.
Publicity Paper Corporation, by same, 25 bls.

SURFACE COATED PAPER

Globe Shipping Company, Sierra Ventana, Bremen, 122 cs.
Genaert Company of America, Minnekahda, Antwerp, 22 cs.

COLORED PAPER

C. W. Williams & Co., Minnekahda, Antwerp, 31 cs.

METAL PAPER

Hensel, Bruckman & Lorbacher, Thuringia, Hamburg, 6 cs.

BLUE PRINT PAPER

Keuffel & Esser, Thuringia, Hamburg, 26 rolls.

KRAFT PAPER

Wilkinson Brothers & Co., Inc., Orbita, Hamburg, 364 bls., 5 rolls.
W. Hartman & Co., by same, 112 bls.

PACKING PAPER

Republic Bag & Paper Company, Elmsport, Rotterdam, 1,577 rolls.
Republic Bag & Paper Company, Orbita, Hamburg, 288 rolls, 375 pkgs.
Wilkinson Brothers & Co., Inc., by same, 32 bls.
Great Eastern Paper Company, by same, 198 bls.
Safran Paper Company, Minnekahda, Hamburg, 11 cs.

WRAPPING PAPER

Gallagher & Ascher, Orbita, Hamburg, 33 bls.
W. Schall & Co., Hansa, Hamburg, 2,372 rolls.
Chase National Bank, by same, 222 rolls, 58 bls.
Wilkinson Brothers & Co., Inc., by same, 6 bls.
Arkell Safety Bag Company, by same, 12 bls.
A. E. MacAdam & Co., Inc., Drottningholm, Gothenburg, 2,112 rolls.

PAPER

M. M. Cohen, Drottningholm, Gothenburg, 358 rolls, 38 bls.
Chatham & Phoenix National Bank, by same, 210 rolls.
The Borregaard Company, by same, 2 bls.
American Express Company, by same, 25 bls.
H. S. Chalfont, by same, 62 rolls.
D. S. Walton & Co., by same, 533 rolls, 30 bls.
Melby, Kutroff & Co., Inc., by same, 11 bls., 1,923 rolls.
Arkell Safety Bag Company, by same, 64 rolls.
C. K. McAlpine & Co., by same, 18 rolls.
Melby, Kuttroff & Co., Inc., Pr. Fillmore, Bremen, 993 rolls.
C. G Keferstein, by same, 573 rolls.
National City Bank, Minnekahda, Hamburg, 534 bls.
M. Greenbaum, Rotterdam, Rotterdam, 63 rolls, 29 cs.
Steiner Paper Corporation, by same, 119 cs.
Safran Paper Company, by same, 13 cs.
P. H. Petry & Co., Hansa, Hamburg, 13 cs.
C. Steiner, S. Ventana, Bremen, 18 bls.
Perry, Ryer & Co., Tarantia, Glasgow, 77 cs.
P. H. Petry & Co., Thuringia, Hamburg, 14 cs.
International Acceptance Bank, by same, 182 rolls.
D. Heydemann & Co., Elmsport, Rotterdam, 36 cs.
Whiting & Patterson, Aquitania, Liverpool, 5 cs.
Gary Paper & Twine Company, Stavangerfjord, Kristiania, 110 rolls.
Wilkinson Brothers & Co., Inc., Orbita, Hamburg, 24 rolls, 54 bls., 501 pkgs.
M. O'Meara Company, by same, 70 bls.
J. P. Hefferman Paper Company, by same, 114 bls.
W. Hartman & Co., Inc., by same, 68 cs., 729 rolls, 28 pkgs., 357 bls.
Publicity Paper Corporation, by same, 144 bls.
C. G. Keferstein, by same, 285 bls.
Manitou Paper Company, by same, 574 bls.

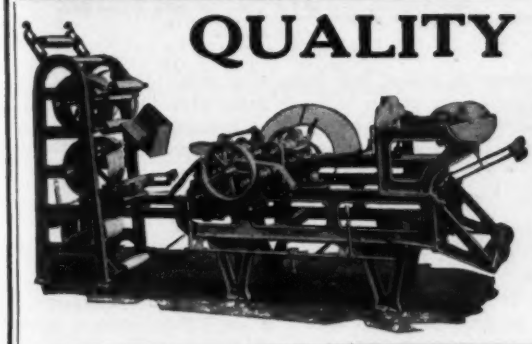
RAGS, BAGGINGS, ETC.

Albion Trading Company, Celtic, Liverpool, 20 bls. rags.
New York Trust Company, Aldecoa, Barcelona, 157 bls. rags.
New York Trust Company, Valfiorita, Barcelona, 121 bls. rags.
Equitable Trust Company, London Mariner, Dundee, 41 bls. paper stock.
C. C. Lavine & Co., Rotterdam, Rotterdam, 41 bls. paper stock.
New York Trust Company, Independence, Hamburg, 91 bls. paper stock.
Guaranty Trust Company, by same, 130 bls. paper stock.
Mechanics & Metals National Bank, by same, 25 bls. rags.
Coal & Iron National Bank, by same, 105 bls. rags.
Goldman, Sachs & Co., S. Ventana, Bremen, 189 bls. rags.
American Express Company, Tarantia, Glasgow, 49 bls. rags.
International Acceptance Bank, by same, 56 bls. paper stock.
Kelly & Co., Inc., Ansonia, Liverpool, 120 bls. paper stock.
E. J. Keller Company, Inc., Thuringia, Hamburg, 472 bls. jute waste.
Second National Bank, by same, 69 bls. rags.
International Acceptance Bank, by same, 50 bls. rags.
Salomon Brothers & Co., by same, 166 bls. jute waste.
J. E. Lodge, Indep. Hall, Havre, 21 bls. rags.
E. J. Keller Company, Inc., by same, 187 bls. rags.
E. J. Keller Company, Inc., Imroko, Antwerp, 24 bls. rags, 195 bls. bagging.
J. W. Hannay, Balsam, Belfast, 136 bls. rags.
Brown Brothers & Co., Balsam, Dublin, 448 bls. waste paper.
Reis & Co., Inc., Elmsport, Rotterdam, 144 bls. cotton waste.
J. J. Patricof & Co., by same, 190 bls. rags.
E. J. Keller Company, Inc., by same, 67 bls. rags.
C. C. Lavine & Co., by same, 329 bls. paper stock.
D. M. Hicks, by same, 49 bls. paper stock.
New York Trust Company, Nuria, Leghern, 318 bls. rags.
Salomon Brothers & Co., Hansa, Hamburg, 6 bls. rags.
Patterson National Bank, Maine, London, 187 bls. rags.
Mechanics & Metals National Bank, Pr. Fillmore, Bremen, 59 bls. rags.
Goldman, Sachs & Co., Fred. VIII, Copenhagen, 67 bls. rags.

OLD ROPE

International Purchasing Company, Indep. Hall, Havre, 186 coils.
E. J. Keller Company, Inc., by same, 39 bls., 144 rolls.
E. J. Keller Company, Innoko, Antwerp, 103 coils.
E. J. Keller Company, Idaho, Hull, 224 coils.
E. J. Keller Company, H. Olav, Copenhagen, 251 coils.
Castle & Overton, Mongolia, Hamburg, 97 coils.

(*Continued on page 70*)



QUALITY *plus* PRODUCTION

MR. BAG MANUFACTURER: For quality and production every machine is guaranteed, so you take no risk.
The Superintendent of a large bag plant, unsolicited, writes: "All the machines used by this Company have been furnished by you. During my fifteen years in the bag line I have used your machines, and consider them the best square and flat bag machines on the market. I see no reason why the bag manufacturers should not be satisfied with your machines. The design of the Fischer machines and workmanship are A No. 1."
Let us quote you on your requirements of flat and square, as well as satchel bottom machines for making 1/16, ⅛ and ¼ barrel sizes.

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HAFSLUND NORWAY — "HAFSLUND BEAR" Bleached Sulphite

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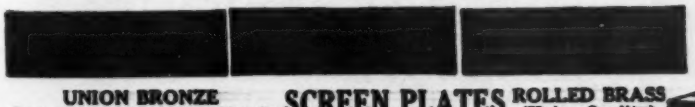

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Old Plates RECLOSED and RECUT to accurate gauge.

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UNION BRONZE SUCTION BOX PLATES

Immediate Delivery of the Largest Orders. Satisfaction Guaranteed.

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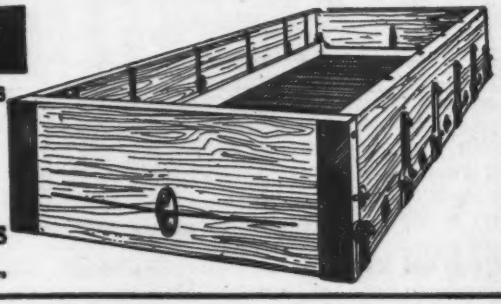


New York Market Review

OFFICES OF THE PAPER TRADE JOURNAL,
WEDNESDAY, DECEMBER 5, 1923

Although the trend of business in the New York paper market continued practically the same this week as last there were no changes worthy of note in prices and the demand was a little better with promise of growing stronger within a week or two. Dealers and manufacturers say that on the whole the situation is greatly improved and they believe that there is little doubt that a real, genuine improvement is in sight.

In the individual classes of paper things were practically unchanged although a better feeling was reported in all lines and the number of inquiries coming in is sufficient to warrant optimism. News print is still leading with the mills running at a good rate and the others are trailing along in about the same order that they have been for the past month.

In some of the other grades the demand is not yet what might be called good, although it is improving. This of course refers to the demand as it is felt by the mills and not by those who come into contact with the ultimate consumers. In wrapping paper, for instance, the recent price cut has failed to entice the great flow of business that was expected, but at the same time more orders have been coming in and it is believed to have reached the turning point. The cut is believed to have had more to do with competition with foreign mills than the demand, anyway.

Taking a long look at the market there seems to have been little real change except for a much more optimistic feeling and a conviction that the period of price-cutting has just about worn itself out. Prices on the whole remained steady with a few minor changes here and there which cannot be considered to have any real bearing on the market situation in general.

Orders for all grades have not shown any tendency to increase in size, although a lot of inquiries are coming in about future business which leads the manufacturers to believe that the reticence of the buyers is just about over.

Mechanical Pulp

The price of mechanical pulp is now down to the neighborhood of forty-five dollars a ton, which is more nearly normal than it was during the brief flurry of a month ago. The grinding mills are curtailing production partly to conserve water and partly to keep from forcing the market. A good demand for mechanical pulp is still holding out since the news print mills are coming in with good orders.

Chemical Pulp

There was a good deal of speculation in the market as to just what effect the lockout in Norway would have on the local market. Dealers and manufacturers have found out to their grief of late that foreign conditions have considerable bearing on what is going on in the New York markets. Meanwhile several shipments of cheap foreign pulp came in during the week which did not help the local situation any. On the whole, however, the market was a trifle better and pulp men say that they see signs of a definite revival of strong buying in the near future.

Rags

In rags the market continued to drag particularly on some of the imported grades. There were some signs of heavier buying and a number of large orders went through the open market which caused prices to become firmer although they did not change to an extent worth noting.

Old Rope and Bagging

Old rope and bagging remained about the same this week with the situation no beter and no worse. The fact that the market is holding up at all leads the dealers to believe that considerably better times are now in sight.

Waste Paper

Waste paper is still a little better than pulp. Many mills are buying some of the grades of waste paper when they do not buy the corresponding grade of pulp. Prices have remained fairly firm without a great tendency to move in either direction.

Government Bids and Awards

[FROM OUR REGULAR CORRESPONDENT.]

WASHINGTON, D. C., December 5, 1923.—The Government Printing Office will receive bids on December 7, for 340,000 (10,000) reams of 24 x 38—34, No. 1 white M. F. printing paper. Bids will also be received on the same date for 11,700 pounds (2,500) reams of various sizes map paper. Also for 500,000 pounds of white news print paper, in 48-inch rolls. Also on 500 pounds, 19 x 24—20 of red stereo type molding paper. The Bureau has received the following bids: for 1,000 plate wiping paper in 4 inch rolls; Paper Manufacturers Company, $.0775 per pound; Old Dominion Paper Company, $.0799; R. P. Andrews $.079 and the Broderick Paper Company, $.095.

The Perkins-Goodwin Company has been awarded the contract for furnishing 40,000 pounds of white M. F. printing paper in 18 inch rolls at $.0635 per pound bids for which were opened on November 16.

Dobler and Mudge will furnish 60,000 pounds (38,000 sheets) of various weights, 25 x 30—No. 2 quality binders board at $.0395 per pound and the R. A. Cauthorne Paper Company will furnish a thousand pounds of tablet stripping machine paper in 24 inch rolls at $.0643 per pound. Bids for these items were opened on November 19.

The Old Dominion Paper Company will furnish 80,400 (600 reams) of 38 x 48—134, half-tone printing paper at $.06599 per pound. Bids for which were opened on November 21.

The Government Printing Office will receive bids on December 10, for 15,000 pounds (5,400 sheets) No. 1 quality, 25 x 30, No. 18, binders board and for 20,000 pounds (4,000 sheets) 34 x 44, No. 10 trunk board.

The Printing office has received the following bids on 17,850 pounds white sulphite writing paper, 17 x 28—25½, No. 20: Old Dominion Paper Company, $.0789 per pound; American Writing Paper Company, $.0805; International Paper Company, $.10795; Dobler and Mudge, $.095; The Champion Fibre Company, $.0744 f.o.b. Washington; The Whitaker Paper Company, $.0722 and $.0885 and $.0942. Maurice O'Meara Company, $.0825 and the Broderick Paper Company, $.09; R. P. Andrews Paper Company, $.0692 and Virginia Paper Company, $.099; The Baxter Paper Company, $.0874.

On 100,000 pounds bristol board, basis 22½—100 in 20 inch rolls of approximately 400 pounds each, and on 56,000 pounds Bristol board, 21 x 31—102 flat.

Royal Card and Paper Company, $.0588 per pound and $.0588 per pound; American Writing Paper Company, $.0682 and $.0706; and $.0655 and $.0678; Barton, Duer and Koch Paper Company, $.0574 and $.0574; Dobler and Mudge, $.0578 and $.0578; Whitaker Paper Company, $.0561 and $.0561; R. P. Andrews Paper Company, $.0559 and $.0559; Carter Rice & Co., $.0555 and $.0555; Reese and Reese, $.05245 and $.054975; R. A. Cauthorne Paper Company, $.0624 and $.0674.

The Champion Coated Paper Company has been awarded the contract by the Government Printing Office for furnishing 86,000 pounds (1,000 reams) of 38 x 48—86, white S. & S. C. printing paper at $.0684 per pound, bids for which were opened on November 19.

The Government Printing Office will receive bids on December 10 for 134,000 pounds (2,000 reams) of 31¼ x 45—67 white S. & S. C. printing paper.

Market Quotations

PAPER STOCK SECURITIES

New York Stock Exchange closing quotations December 4, 1923.

	BID	ASKED
American Writing Paper Company, pref	2	2¼
International Paper Company, com	33½	34
International Paper Company, pref. stamped	62	62⅞
Union Bag & Paper Corporation	60	61

Paper

F. o. b. Mill		
Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@30.00
Superfine	14.00	@30.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—f. o. b. Mill—		
Rolls, contract	3.75	@ 4.00
Rolls, transit	4.00	@ 4.25
Sheets	4.25	@ 4.50
Side runs	3.50	@ 4.15
Book, Cased—f. o. b. Mill—		
S. & S. C.	7.25	@ 9.00
M. F.	7.00	@ 8.75
Coated and Enamel	9.00	@14.00
Lithograph	9.00	@14.00
Tissues—f. o. b. Mill—		
White No. 1	.80	@ .90
White No. 2	.85	@ .95
Colored	1.15	@ 2.00
Anti-Tarnish	1.50	@ 2.00
Kraft	.95	@ 1.15
Manila	.78	@ .85
Kraft—f. o. b. Mill—		
No. 1 Domestic	6.00	@ 6.25
No. 2 Domestic	5.25	@ 5.75
Imported	4.65	@ 5.20
Manila—		
No. 1 Jute	8.50	@ 9.00
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	4.25	@ 4.75
Fibre Papers—		
No. 1 Fibre	5.50	@ 5.75
No. 2 Fibre	5.00	@ 5.25
Common Bogus	3.50	@ —
S. Screening	3.25	@ 3.75
Card Middles	4.00	@ 5.00
Boards—per ton—		
News	55.00	@60.00
Straw	61.00	@63.00
Chip	50.00	@55.00
Binders' Boards	70.00	@75.00
Sgl. Mla. Ll. Chip	65.00	@75.00
Wood Pulp	70.00	@75.00
Container	70.00	@80.00
Sulphate Screenings—		
Coarse	.80	@ .90
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	12.00	@15.00
Bleached, basis 20 lbs.	14.00	@17.00

Mechanical Pulp

(Ex-Dock)		
No. 1 Imported	40.00	@45.00
(F. o. b. Mill)		
No. 1 Domestic	40.00	@45.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)		
Sulphite (Imported)—		
Bleached	4.50	@ 5.00
Easy Bleaching	3.50	@ 3.75
No. 1 strong unbleached	3.30	@ 3.50
No. 2 Strong unbleached	2.85	@ 3.10
No. 1 Kraft	3.25	@ 3.40
Sulphate—		
Bleached	4.00	@ 4.15
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	4.30	@ 5.00
Easy Bleaching Sulphite	3.25	@ 3.50
News Sulphite	3.00	@ 3.25
Mitscherlich	3.20	@ 3.30
Kraft (Domestic)	3.10	@ 3.30
Soda Bleached	4.25	@ 4.35

Domestic Rags

New Prices to Mill, f. o. b. N. Y.		
Shirt Cuttings—		
New White, No. 1	12.00	@13.00
New White, No. 2	6.00	@ 6.50
Silesias, No. 1	7.00	@ 7.50
New Unbleached	10.50	@11.00
Washables	4.75	@ 5.00
Fancy	5.50	@ 6.00
Blue Overall	7.50	@ 8.00
New Blue	5.00	@ 5.55
New Black Soft	4.75	@ 5.25
New Light Seconds	2.75	@ 3.00
O. D. Khaki Cuttings	4.25	@ 4.50
Men's Corduroy	3.50	@ 3.75
New Canvas	6.50	@ 7.00
New Black Mixed	2.60	@ 2.80
White, No. 1—		
Repacked	5.75	@ 6.25
Miscellaneous	5.00	@ 5.25
White, No. 2—		
Repacked	3.80	@ 4.12
Miscellaneous	3.25	@ 3.50
St. Soiled, White	2.50	@ 2.75
Thirds and Blues—		
Repacked	2.60	@ 2.87
Miscellaneous	2.25	@ 2.50
Black Stockings	2.75	@ 3.00
Roofing Rags—		
Cloth Strippings	1.30	@ 1.40
No. 1	1.30	@ 1.40
No. 2	1.20	@ 1.30
No. 3	.85	@ .95
No. 4	.85	@ .95
No. 5A	1.00	@ 1.10

Foreign Rags

New Light Silesias	5.50	@ 7.50
Light Flannelettes	8.00	@ —
Unbl'chd Cottons	7.50	@ 8.50
New White Cuttings	10.00	@11.00
New Light Oxfords	6.00	@ 7.25
New Light Prints	4.50	@ 6.00
New Mixed Cuttings	2.00	@ 2.50
New Dark Cuttings	1.80	@ 2.20
No. 1 White Linens	10.00	nominal
No. 2 White Linens	6.50	nominal
No. 3 White Linens	5.00	nominal
No. 4 White Linens	3.50	nominal
Old Extra Light Prints	2.50	nominal
Ord. Light Prints	2.25	nominal
Med. Light Prints	2.00	nominal
Dutch Blue Cotton	2.50	nominal
German Blue Cottons	2.00	nominal
Ger. Blue Linens	3.00	@ 3.25
Checks and Blues	1.25	@ 1.50
Dark Cottons	1.25	@ 1.40
Shoppery	1.00	@ 1.05
French Blues	2.25	nominal

Bagging

Prices to Mill F. o. b. N. Y.		
Gunny No. 1—		
Foreign	1.20	@ 1.30
Domestic	1.30	@ 1.35
Wool, Tares, light	1.30	@ 1.40
Wool, Tares, heavy	1.30	@ 1.40
Bright Bagging	1.05	@ 1.20
Sound Bagging	.90	@ 1.00
Manila Rope—		
Foreign	4.75	@ 5.25
Domestic	5.00	@ 5.50
New Bu. Cut	2.15	@ 2.25
Hessian Jute Threads—		
Foreign	2.00	@ 2.25
Domestic	2.00	@ 2.10

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.32	@ .36
No. 2	.29	@ .31
No. 3	.34	@ .36
India, No. 6 basis—		
Light	.17	@ .18
Dark	.16	@ .17
B. C., 18 basis	.41	@ .42
A. B. Italian, 18 Basis	.51	@ .61
Finished Jute—		
Dark, 18 basis	.29	@ .30
Light, 18 basis	.26	@ .27
Jute Wrapping, 3-6 Ply—		
No. 1	.20	@ .23
No. 2	.18	@ .20
Tube Rope—		
4-ply and larger	.15	@ .17
Fine Tube Yarn—		
5-ply and larger	.19	@ .21
4-ply	.20	@ .22
3-ply	.20	@ .22
Unfinished Indis—		
Basis	.16	@ .17
Paper Makers' Twine Balls	.09	@ .11
Box Twine, 2-3 ply	.14	@ .15
Jute Rope	.15	@ .16
Amer. Hemp, 6	.30	@ .32
Sisal Hay Rope—		
No. 1 Basis	.14	@ .16
No. 2 Basis	.10	@ .12
Sisal Lath Yarn—		
No. 1	.14	@ .15
No. 2	.11	@ .13
Manila Rope	.18	@ .19

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	4.10	@ 4.20
Hard, White, No. 2	3.25	@ 3.35
Soft, White, No. 1	3.15	@ 4.30
Flat Stock—		
Stitchless	1.80	@ 1.90
Over Issue Mag.	1.80	@ 1.90
Solid Flat Book	1.60	@ 1.85
Crumbled No. 1	1.35	@ 1.45
Solid Book Ledger	1.95	@ 2.35
Ledger Stock	1.75	@ 1.85
New B. B. Chips	.70	@ .80
Manilas—		
New Env. Cut	2.55	@ 2.65
New Cut No. 1	1.85	@ 2.10
Extra No. 1 old	1.40	@ 1.50
Print	1.05	@ 1.15
Container Board	.95	@ 1.00
Bogus Wrapper	.85	@ .95
Old Krafts, machine compressed bales	2.10	@ 2.20
News—		
No. 1 White News	2.00	@ 2.15
Strictly overissue	1.10	@ 1.20
Strictly Folded	.85	@ .95
No. 1 Mixed Paper	.55	@ .70
Common Paper	.45	@ .55

CHICAGO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

F. o. b. Mill		
All Rag Bond	35	@ 40
No. 1 Rag Bond	20	@ 25
No. 2 Rag Bond	14	@ 25
Water Marked Sulphite	9½	@ 13
Sulphite Bond	8	@ 10¼
Sulphite Ledger	9½	@ 13
Superfine Writing	18	@ 24
No. 1 Fine Writing	14	@ 18
No. 2 Fine Writing	12	@ 14
No. 3 Fine Writing	9	@ 12
No. 1 M. F. Book	5¾	@ 7½
No. 1 S. & S. C. Book	6¼	@ 7¾
Coated Book	8½	@ 10
Coated Label	8¼	@ 10
News—Rolls, mill	3¾	@ 4½
News—Sheets, mill	4¼	@ 4¾
No. 1 Manila	5	@ 6½
No. 1 Fibre	5¾	@ 6¾
No. 2 Manila	4¾	@ 5
Butchers' Manila	4½	@ 4¾
No. 1 Kraft	5¾	@ 6¾
No. 2 Kraft	5½	@ 6
Wood Tag Boards	4½	@ 6
Screenings	3½	@ 3¾
Boards, per ton—		
Plain Chip	$45.00	@50.00
Solid news	50.00	@55.00
Manila Lined		
Chip	60.00	@62.50
Container Lined—		
85 Test	70.00	@75.00
100 Test	75.00	@80.00

Old Papers

F. o. b. Chicago

Shavings—		
No. 1 Hard White	3.70	@ 3.80
No. 1 Soft Shav.	2.90	@ 3.00
No. 1 Mixed	1.30	@ 1.40
No. 2 Mixed	1.20	@ 1.30
White Envel. Cuttings	3.70	@ 3.80
Ledgers and Writings	1.85	@ —
Solid Books	1.70	@ —
No. 1 Books, Light	1.45	@ —
Blanks	2.20	@ 2.25
Ex. No. 1 Manila	2.30	@ 2.40
Manila Envelope Cuttings	2.50	@ 2.60
No. 1 Manilas	1.30	@ 1.40
Folded News (over issue)	1.00	@ —
Old Newspaper	.85	@ .90
Mixed Papers	.85	@ .90
Straw Clippings	.80	@ .85
Binders' Clippings	.80	@ .85
Kraft	2.25	@ —
New Kraft Cuts	2.40	@ 2.50
Roofing Stock, f. o. b. Chicago, Net Cash—		
No. 1	33.00	@ —
No. 2	31.00	@ —
No. 3	29.00	@ —
No. 4	29.00	@ —

PHILADELPHIA

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.10	@ .60
Ledgers	.15	@ .40
Writings—		
Superfine	.15	@ .20
Extra fine	.12	@ .22
Fine	.20	@ .30
Fine, No. 2	.20	@ .25
Fine, No. 3	.15	@ .20
Book, M. F.	.06	@ .11
Book, S. S. & C.	.08	@ .15
Book, Coated	.08	@ .15
Coated Lithograph	.10	@ .15
Label	.08	@ .15
News	.05	@ .07
No. 1 Jute Manila	.12	@ .13
Manila Sul., No. 1	.08	@ .10
Manila No. 2	.07½	@ .08
No. 2 Kraft	—	@ .10
No. 1 Kraft	—	@ .11
Common Bogus	.02½	@ .03
Straw Board	75.00	@85.00
News Board	65.00	@70.00
Chip Board	62.50	@67.00
Wood Pulp Board. (Carload Lots)	1.25	@ 1.50
Binder Boards—		
Per ton	75.00	@80.00
Carload lots	75.00	@80.00
Tarred Felts—		
Regular	48.00	@50.00
Slaters	54.00	@56.00
Best Tarred, 1-ply (per roll)	1.35	@ 1.50
Best Tarred, 2-ply (per roll)	1.00	@ 1.15
Best Tarred, 3-ply	1.50	@ 1.65

Bagging

F. o. b. Phila.

Gunny No. 1—		
Foreign	1.25	@ —
Domestic	1.20	@ 1.25
Manila Rope	5.00	@ 6.00
Sisal Rope	.75	@ .80
Mixed Rope	.75	@ .80
Scrap Burlaps	1.00	@ 1.25
Wool Tares, heavy	2.50	@ 2.75
Mixed Strings	.75	@ .80
No. 1, New Lt. Burlap	1.75	@ 2.00
New Burlap Cuttings	1.75	@ 2.10

Old Papers

F. o. b. Phila.

Shavings—		
No. 1, Hard White	4.25	@ 4.40
No. 2, Hard White	3.50	@ 3.75
No. 1 Soft White	3.25	@ 3.50
No. 2 Soft White	2.15	@ 2.25

(Continued on page 72)

Imports and Exports of Paper and Paper Stock

(*Continued from page 66*)

International Acceptance Bank, Tarantia, Glasgow, 57 coils.
W. Schall & Co., Valfiorita, Barcelona, 45 coils.
Brown Brothers & Co., Valfiorita, Marseilles, 50 coils.
Brown Brothers & Co., Thuringia, Hamburg, 51 coils.
Brown Brothers & Co., Rotterdam, Rotterdam, 36 coils.
Brown Brothers & Co., Minnekahda, Antwerp, 192 coils.
Brown Brothers & Co., Fred. VIII, Copenhagen, 150 coils.
Brown Brothers & Co., Hansa, Hamburg, 64 coils.
Brown Brothers & Co., Maine, London, 409 coils, 55 bls.
M. Wolfer, Pastores, Havana, 29 bls.

WOOD PULP

Castle & Overton, S. Ventana, Bremen, 960 bls. wood pulp.
H. Hollesen, by same, 3,535 bls. wood pulp.
H. Hollesen, Orbita, Hamburg, 1,910 bls. wood pulp.
M. Gottesman & Co., Inc., by same, 330 bls. wood pulp.
M. Gottesman & Co., Inc., Pr. Fillmore, Bremen, 500 bls., 75 tons wood pulp.
M. Gottesman & Co., Inc., Minnekahda, Hamburg, 1,350 bls. wood pulp.
Castle & Overton, S. Ventana, Germany, 1,650 bls. wood pulp.
New York Trust Company, Topdalsfjord, Kristiania, 1,250 bls. sulphite pulp.
R. F. Hammond, Inc., by same, 1,000 bls. sulphite pulp, 200 tons.
E. M. Sergeant & Co., by same, 500 bls. sulphite pulp.
National City Bank, by same, 250 bls. sulphite pulp.
New York Trust Company, by same, 125 bls. sulphite pulp.
J. Anderson & Co., by same, 750 bls. sulphite pulp.
Perkins, Goodwin & Co., Stavangerfjord, Kristiania, 250 bls. sulphite pulp.
Kidder-Peabody Accep. Corp., by same, 5,000 bls. mechanical pulp.
Bulkley, Dunton & Co., by same, 1,500 bls. mechanical pulp.
National City Bank, Drottningholm, Gothenburg, 1,197 bls. dry soda pulp.
Johanesson, Wales & Sparre, Inc., by same, 175 bls. dry soda pulp.
Johanesson, Wales & Sparre, Inc., by same, 1,650 bls. sulphite pulp.
Scandinavian Pulp Agency, Inc., by same, 2,500 bls. sulphite pulp.

WOOD FLOUR

Innes, Spieden & Co., Topdalsfjord, Kristiania, 2,030 bags, 102,921 ks.

CASEIN

Kalbfleisch Corp., Southern Cross, Buenos Aires, 834 bags.
Bank of The Manhattan Company, Thuringia, Hamburg, 397 bags, 22,720 ks.
Bankers' Trust Company, C. Constructor, Auckland, 350 bags.

PHILADELPHIA IMPORTS

WEEK ENDING DECEMBER 1, 1923

A. Dad's Son, Innoko, Antwerp, 174 rolls colored paper.
F. Weber, City of St. Joseph, Genoa, 10 cs. paper.
E. J. Keller Company, Inc., by same, 64 bls. cotton waste.
New York Trust Company, City of St. Joseph, Marseilles, 241 bls. rags.
Union National Bank, City of St. Joseph, Leghorn, 47 bls. rags.
Ladenburg, Thalman & Co., by same, 182 bls. rags.
National Bank of Commerce, by same, 83 bls. rags.
E. J. Keller Company, Inc., Aldecoa, Marseilles, 26 bls. rags.
New York Trust Company, Aldecoa, Barcelona, 1,436 bls. rags.
New York Trust Company, Carenco, Naples, 426 bls. rags.
Katzenstein & Keene, Inc., Carenco, Legborn, 91 bls. rags.
Katzenstein & Keene, Inc., Blair, Manchester, 104 bls. rags.
Katzenstein & Keene, Alleghany, Glasgow, 48 bls. rags.
Katzenstein & Keene, Inc., Independence Hall, Havre, 35 bls. rags.
Patterson Parchment Paper Co., by same, 25 bls. rags.
Castle & Overton, by same, 282 bls. rags.
Castle & Overton, by same, 69 bls. bagging.
National Bank of Commerce, by same, 60 bls. rags.
New York Trust Company, Independence Hall, Dunkirk, 40 bls. rags.
Bankers' Trust Company, by same, 100 bls. rags.
E. J. Keller Company, Inc., Independence Hall, Havre, 323 bls. rags.
E. J. Keller Co., Inc., Independence Hall, Havre, 205 bls. bagging.
E. J. Keller Company, Innoko, Antwerp, 60 bls. rags.
A. Brown & Son, by same, 346 bls. rags.
A. Brown & Son, by same, 21 bls. bagging.
Philadelphia National Bank, by same, 182 bls. rags.
Brown Bros. & Company, by same, 194 bls. rags.
Waste Material Trading Corp., by same, 236 bls. rags.
A. Hurst & Co., by same, 169 bls. rags.
American Wood Pulp Corp., by same, 167 bls. rags.
D. J. Murphy, by same, 171 bls. rags.
E. Butterworth & Co., Inc., by same, 47 bls. rags.
J. W. Hannay, by same, 53 bls. new cuttings.
Castle & Overton, Innoko, Antwerp, 39 bls. rags.
Castle & Overton, M. Merchant, Manchester, 43 bls. rags.
Castle & Overton, Zarembo, Havre, 364 bls. rags.
Castle & Overton, Laponia, Sweden, 1,800 bls. wood pulp.
Castle & Overton, by same, 1,235 bls. wood pulp.

BALTIMORE IMPORTS

WEEK ENDING DECEMBER 1, 1923

A. Brown & Son, City of St. Joseph, Marseilles, 497 bls. rags.
Castle & Overton, S. Ventana, Germany, 1,522 bls. wood pulp.

NEW ORLEANS IMPORTS

WEEK ENDING DECEMBER 1, 1923

Castle & Overton, Missouri, Havre, 173 bls. rags.

GALVESTON IMPORTS

WEEK ENDING DECEMBER 1, 1923

E. J. Keller Company, Inc., W. Narrames, Antwerp, 96 bls. rags.

BOSTON IMPORTS

WEEK ENDING DECEMBER 1, 1923

C. K. McAlpin & Co., F. Bulow, Hamburg, 16 bls. wrapping paper.
R. F. Hammond, Inc., Tortugas, Christiania, 500 bls. wood pulp, 100 tons.
E. J. Keller Company, Inc., F. Bulow, Hamburg, 324 bls. rags.
Katzenstein & Keene, Inc., by same, 114 bls. rags.
G. M. Granes Co., Inc., Maine, London, 125 bls. rags.

Legislative Books Sold as Junk

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., December 3, 1923.—The bulk of about 20,500 volumes containing the debates, bulletins, journals and manuals of the Massachusetts Constitutional Convention held in this state in 1917-18-19, and costing the Commonwealth of Massachusetts slightly over $23,000, has been sold as waste paper for $637.92.

The volumes, which were substantially bound, weighed 35,440 pounds, being sold as junk at the rate of $36 per ton. Out of the entire number of volumes, which were printed in 1919-20, approximately 75 sets were sold netting the State $676.66.

Sells Berkshire Stock Range

[FROM OUR REGULAR CORRESPONDENT.]

HOLYOKE, Mass., December 4, 1923.—J. Louis Perkins of the American Tissue Mills, Inc., and B. F. Perkins and Son has sold his farm known as the Berkshire Hills Stock Range to J. M. Williams of Springfield.

Increases Its Capital Stock

[FROM OUR REGULAR CORRESPONDENT.]

BOSTON, Mass., December 3, 1923.—The Boston Publishing Company, publishers of the Boston *Herald*, has notified the Massachusetts State Commissioner of Corporations that the capital stock has been increased by the issue of 20,496 shares of no par common stock in exchange for common stock of $5 par value in the ratio of 28 shares of no par stock for each share of $5 par stock. Authorized capital stock now consists of 10,430 shares of prior preference, $100 par; 11,000 shares preferred, $100 par; and 20,496 shares of no par common stock.

Leaves on Advertising Campaign

NEWARK, N. J., December 5, 1923.—William R. Lusignea, General Manager of the Samuel Jones & Co. Division of the McLaurin-Jones Co. has left on a trip to present the company's proposed advertising campaign to distributors of the "Ideal" and "Jones" Gummed Papers.

New York Office
280 Broadway

Dayton Office

Chicago Office
10 So. La Salle St.

Compare it
Tear it
Test it
and you will specify it

HOWARD BOND

WATERMARKED

"The Nation's Business Paper"

Made by

THE HOWARD PAPER CO. URBANA, OHIO

Howard Laid Bond
Howard Ledger
Howard Bond Envelopes

Clay

300 tons daily

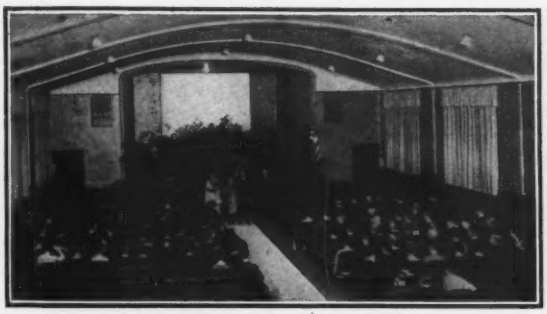
AMERICAN MADE FOR AMERICAN TRADE

Over forty years experience in the clay industry has naturally resulted in the adoption of the most scientific methods and practices.
This record of achievement is your guaranty of *Clay* of absolute uniformity at prices consistent with M-E quality and service.

Let us submit samples and quote you

MECCO

THE MINER-EDGAR CO.
110 WILLIAM ST.,
NEW YORK



Autumn Wedding at Parchment Hall

On this occasion, the first Wedding to be formally celebrated by Parchment folks in their Community House, Miss Catherine Hassing of the office staff and Mr. Roy Snyder of the Parchment Division were united in marriage by the Rev. O. R. Grattan, Community Pastor. After the ceremony, supper was served in the dining room below.

Kalamazoo Vegetable Parchment Co.
Kalamazoo, Mich.

TYPE "B" IRON EXTRACTOR

It consists of special magnetic surfaces of great power over which the paper stuff is made to pass. As a result, all the iron and many other foreign substances are completely extracted. Hundreds of these devices are in use daily and no one of them has failed to give complete satisfaction. Write us for Bulletins and full details.

for PAPER MAKING

THE ROLAND T. OAKES CO., Holyoke, Mass.
Electrical Specialists. *Established 1885*

Miscellaneous Markets

OFFICE OF THE PAPER TRADE JOURNAL,
WEDNESDAY, December 5, 1923.

The chemical market is beginning to feel the improvement in affairs in the big market although there has been no real change in prices. Dealers throughout the city are reporting that there are definite signs that the buyers are running out of supplies with the resumption of demand in paper and they say that while there is no change at present there is bound to be in the near future.

In spite of the fact that there was practically no change in the situation in the chemical market during the past week a generally better feeling was prevalent owing to the improved condition in the paper and pulp markets. Prices have not changed to any marked extent with the exception of one or two articles which have gone down a trifle. These changes are noted below. Outside of this the market has been static.

BLEACHING POWDER.—Trading in bleach was dull despite the willingness of several large manufacturers to sell at extremely low prices in order to beat out their competitors. Just why such a fight was started in a dull market is difficult to explain. It may be that when the campaign was launched it was thought that the market was recovering sufficiently to make things interesting. As the situation stands now it is impossible to quote because of the marked lack of firmness. As the price went slithering downward reputable dealers were taking 1.25 to 1.40 cents, spot 1.25 better.

CAUSTIC SODA.—Caustic also was in poor demand this week in comparison with what was expected of it. This should not be construed as meaning that caustic is in the doldrums, but dealers hope to see an increase very soon. The price is around 3.10 cents a pound on a flat basis at the works. It is thought that the slightly lower price will attract buyers who have been heretofore holding off.

CASEIN.—Casein has not changed much during the past week with the demand about the same and no sign of any upward or downward changes in the price. It is still quoted at from 14 to 18 cents a pound in both the domestic and the foreign grades.

CHINA CLAY.—The same prices continue on china clay with the buying hardly what could be called brisk, but enough to keep things moving along at an even rate. Prices on the domestic grades are from $12 to $15 a ton and on the imported run from $16 to $20.

CHLORINE.—The demand for chlorine has not changed during the week with no further recovery reported. Orders are still for small quantities and it is reported that the dealers have some on hand. Prices continue at 3.25 to 3.50 cents a pound in tank cars.

ROSIN.—Naval stores also remained in a static condition during the past seven days with the price about the same. The paper industry is not calling for so much of the product as it generally does at this time but manufacturers say that there is little hope for any reductions in price. The price is about $5.80 to $6 in 280 pound barrels.

SALTCAKE.—Saltcake is still in fair demand, although there was a slight falling off in the call for it during the past week. The situation is not such as to cause any change in the price, however, which remains at from $22 to $24 a ton. It is said that concessions will be made in this on the open market in some instances.

SODA ASH.—Manufacturers of soda ash say that the demand for this is somewhat better than that for bleach and caustic, although it is not as good as they had hoped it would be. It is still improving slowly and outside the paper industry dealers are having little trouble in disposing of it. The price is 1.38 cents on a flat basis.

SULPHITE OF ALUMINA.—Alumina is not quite as good demand as it was. Dealers report that they have fairly large stocks on hand, but there is no tendency toward extreme price cutting. The price remains at 2.00 to 2.25 cents for the iron free and 1.20 to 1.30 cents for the commercial grades per pound.

Market Quotations

(*Continued from page 69*)

No. 1 Mixed	1.60	@	1.75
No. 2 Mixed	1.25	@	1.50
Solid Ledger Stock	2.25	@	2.50
Writing Paper	2.00	@	2.25
No. 1 Books, heavy	2.00	@	2.25
No. 2 Books, light	1.40	@	1.50
No. 1 New Manila	2.75	@	3.00
No. 1 Old Manila	1.75	@	2.00
Container Manila	1.25	@	1.50
Old Kraft	2.25	@	2.50
Overissue News	1.25	@	1.35
Old Newspaper	.90	@	1.00
No. 1 Mixed Paper	1.00	@	1.10
Common Paper	.80	@	.90
Straw Board, Chip	1.00	@	1.10
Binders Bd., Chip	1.00	@	1.10

Domestic Rags—New.
Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.12	@	.12¼
New White, No. 2	.07	@	—
Silesias, No. 1	.07¼	@	.07½
New Unbleached	.10	@	.11
Washables	.04½	@	—
Fancy	.05¼	@	.05½
Cottons—according to grades—			
Blue Overall	.05½	@	.05¾
New Blue	.02¼	@	.02¾
New Black Soft	.05¾	@	.06¼
New Light Seconds	.02¾	@	.02¼
Khaki Cuttings	.11	@	.04¼
Corduroy	.03½	@	.04
New Canvas	.08¼	@	.08¾
New Black Mixed	.04	@	—
Old White, No. 1—			
Repacked	.06	@	.06¼
Miscellaneous	.04½	@	.04¾
White, No. 2—			
Repacked	.03½	@	.04
Miscellaneous	.03	@	.03¼
Thirds and Blues—			
Repacked	2.50	@	2.75
Miscellaneous	2.15	@	2.35
Black Stockings	2.75	@	3.00
Roofing Stock—			
No. 1	1.35	@	1.40
No. 2	1.25	@	1.30
No. 3	.75	@	.90
No. 4	1.15	@	1.20
No. 5A	1.10	@	—
B			nominal
C			nominal

BOSTON

[FROM OUR REGULAR CORRESPONDENT.]

Paper

Bonds	.09	@	.63
Ledgers	.09	@	.55
Writings	.08¼	@	.42
Superfine	.16	@	.26
Fine	.15	@	.18
Books, S. & S. C.	.07¼	@	.12
Books, M. F.	.07¼	@	.09½
Books, coated	.09	@	.15
Label	.09	@	.13
News, sheets	4.75	@	6.00
News, rolls	4.50	@	5.75
Manilas—			
No. 1 Manila	6.00	@	7.00
No. 1 Fiber	.06½	@	.07
No. 1 Jute	9.00	@	10.50
Kraft Wrapping	.07	@	—
Common Bogus	3.50	@	3.85

Boards

(Per Ton Destination)

Chip	$45.00	@	50.00
News, Vat Lined	50.00	@	—
Wood, Vat Lined	55.00	@	57.50
Filled News Board	50.00	@	52.50
Solid News Board, No. 4 Finish	70.00	@	—
S. Manila Chip	65.00	@	72.50
Pat. Coated	85.00	@	95.00

Old Papers

Shavings—			
No. 1 Hard White	3.75	@	4.00
No. 1 Soft White	3.00	@	3.15
No. 1 Mixed	1.00	@	1.25
Ledgers & Wedding	2.00	@	—
Solid Books	1.60	@	1.80
Blanks	2.00	@	2.25
No. 2 Light Books	1.50	@	—
Folded News, overissues	.90	@	.95
Gunny Bagging	1.25	@	1.30
Manila Rope	6.75	@	7.00
Mixed paper	.45	@	—
Old News	.85	@	—
Old Kraft	1.90	@	2.10
No. 1 Scrap Burlap	1.00	@	1.10
No. 2 Roofing Bagging	.90	@	—
Mixed Strings	1.00	@	1.10
No. 1 Roofing Rags	1.45	@	1.50

TORONTO

[FROM OUR REGULAR CORRESPONDENT.]

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.11	@	.12½
Light tinted	.12	@	.13½
Dark Tinted	.13½	@	.15
Ledgers (sulphite)	—	@	.13
Writing	.09½	@	.12
News, f. o. b. Mills—			
Rolls (carloads)	3.75	@	—
Sheets (carloads)	—	@	4.50
Sheets (2 tons or over)	—	@	4.75
Book—			
No. 1 M. F. (carloads)	9.00	@	—
No. 2 M. F. (carloads)	8.00	@	—
No. 3 M. F. (carloads)	7.50	@	—
No. 1 S. C. (carloads)	9.50	@	—
No. 2 S. C. (carloads)	8.50	@	—
No. 1 Coated and litho	14.50	@	—
No. 2 Coated and litho	13.50	@	—
No. 3 Coated and litho	12.75	@	—
Wrapping—			
Grey	5.00	@	—
White Wrap	5.75	@	—
"B" Manila	6.00	@	—
No. 1 Manila	7.25	@	—
Fiber	7.25	@	—
Kraft, M. F.	8.00	@	—
M. G.	8.15	@	—

Pulp

(F. o. b. Mill)

Ground wood	$45.00	@	46.00
Sulphite easy bleaching	60.00	@	65.00
Sulphite news grade	55.00	@	60.00
Sulphite, bleached	85.00	@	90.00
Sulphate	70.00	@	75.00

Old Waste Papers

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. Cut	3.65	@	
Soft White Book shavings	3.20	@	
White Blk. News	2.15	@	
Book and Ledger—			
Flat Magazine and Book Stock (old)	1.85	@	—
Light and Crumpled Book Stock	1.70	@	—
Ledgers and Writings	1.85	@	2.25
Solid Ledgers	2.00	@	—
Manilas—			
New Manila Cut	2.15	@	
Printed Manilas	1.55	@	—
Kraft	2.15	@	
News and Scrap—			
Strictly Overissue	1.00	@	
Folded News	1.00	@	
No. 1 Mixed Papers	.80	@	

Domestic Rags—
Price to mills, f. o. b. Toronto
Per lb.

No. 1 White shirt cuttings	.12	@	.12½
No. 2 White shirt cuttings	.06	@	—
Fancy shirt cuttings	.05½	@	.06
No. 1 Old Whites	.04½	@	—
Third and blues	.02½	@	.02¾

Per cwt.

Black stockings	.03	@	—
Roofing stock:			
No. 1	—	@	—
No. 2	—	@	—
Manila rope	.06¼	@	.06
No. 2	1.55	@	—
Gunny Bagging	.01¾	@	—